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TOXIC PALS GRAF: PROVING CAUSATION WHEN THE LINK BETWEEN CONDUCT AND INJURY APPEARS HIGHLY EXTRAORDINARY

Rory A. Valas*

*It is no doubt generally felt that the whole subject of "proximate causation" is a bogey, the sort of thing found only in children's story books—a sort of child's mind creation.*¹

I. INTRODUCTION

Legal, or proximate, causation is one of the most elusive and widely discussed obstacles to recovery for the toxic tort victim.² An actor can only be held liable for negligent conduct if such conduct is both the factual and the proximate cause of another's injury.³ Much confusion stems from courts' varied applications of the term "proximate causation."⁴

While the general doctrine of proximate causation itself is vague, courts have given widely varying interpretations to one rule of prox-

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¹ L. GREEN, RATIONALE OF PROXIMATE CAUSE, at v (1927).

² See W. PROSSER & W. KEETON, THE LAW OF TORTS § 41, at 263 (5th ed. 1984); Farber, *Toxic Causation*, 71 MINN. L. REV. 1219, 1225–27 (1987); Comment, *Personal Injury Hazardous Waste Litigation: A Proposal for Tort Reform*, 10 B.C. ENVTL. AFF. L. REV. 797, 823 (1983) (authored by Mark D. Seltzer); *Developments in the Law—Toxic Waste Litigation*, 99 HARV. L. REV. 1458, 1611 (1986) [hereinafter *Developments*]; Annotation, *Foreseeability as an Element of Negligence and Proximate Cause*, 100 A.L.R.2d 942, 945 (1965).

³ W. PROSSER & W. KEETON, *supra* note 2, § 42, at 272–73. The policy considerations that are now inherent in the common law rules of proximate causation, as well as the difficulty of distinguishing actual from proximate causation, contributes greatly to the confusion in causation determinations. *Id.*

⁴ See *id.* §§ 41–45, at 263–322; Green, *The Causal Relation Issue in Negligence Law*, 60 MICH. L. REV. 543, 550 (1962); T. SHEARMAN & A. REDFIELD, A TREATISE ON THE LAW OF NEGLIGENCE § 35, at 94–96 (1941).

imate causation in particular, upon which this Comment focuses.⁵ The American legal system has fashioned a rule of tort law that a defendant may not be liable if it appears highly extraordinary and unforeseeable that the plaintiff's injuries occurred as a result of the defendant's alleged tortious conduct.⁶ The *Restatement (Second) of Torts* documents that rule in section 435(2).⁷

Proof of causation in tort actions involving hazardous waste often involves a great deal of uncertainty in both the legal concepts and the scientific proof. Accordingly, the link between the defendant's conduct and the injurious consequences of that conduct often appear extraordinary.⁸ If courts apply section 435(2) liberally so that, as a matter of law, uncertainty in causation prevents the courts from holding a defendant liable, then the consequences could be harsh and unfair to parties injured by negligent conduct.⁹ The courts, rather, should define the term "highly extraordinary" conservatively and carefully according to the facts and circumstances of each toxic tort case.¹⁰

⁵ See F. HARPER, F. JAMES & O. GRAY, *THE LAW OF TORTS* § 20.5, at 168 (1986) [hereinafter F. HARPER].

⁶ RESTATEMENT (SECOND) OF TORTS § 435(2) (1965); F. HARPER, *supra* note 5, at 167-68.

⁷ *Restatement (Second) of Torts* § 435(2) provides:

The actor's conduct may be held not to be a legal cause of harm to another where after the event and looking back from the harm to the actor's negligent conduct, it appears to the court highly extraordinary that it should have brought about the harm.

Id.

⁸ *E.g.*, *Reserve Mining Co. v. Environmental Protection Agency*, 514 F.2d 492, 501-02 (8th Cir. 1975). See Brennan, *Causal Chains and Statistical Links: The Role of Scientific Uncertainty in Hazardous Substance Litigation*, 73 CORNELL L. REV. 469, 491 (1988); Farber, *supra* note 2, at 1225-27 (1987); Comment, *supra* note 2, at 825.

⁹ In *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986), *aff'd sub nom.* *Anderson v. Cryovac*, 862 F.2d 910 (1st Cir. 1988), primarily because there were other defendants that settled with the plaintiffs, very harsh results did not ensue from the application of section 435(2), which some have argued effectively relieved defendant Beatrice from liability. See Pacelle, *Contaminated Verdict*, *Am. Law.*, Dec. 1986, at 78, cols. 2-4. Otherwise the results could have been deemed harsh and unfair. See *id.* at 75-80 for a discussion of the *Anderson* case.

¹⁰ See *infra* notes 112-71, 208-60 and accompanying text. The Supreme Court of Illinois, for example, has defined "highly extraordinary" conservatively so that negligent parties are liable for the damage resulting from their negligence unless the link between the negligent conduct and the damage appears very bizarre. See *Cunis v. Brennan*, 56 Ill. 2d 372, 308 N.E.2d 617 (1974); *Mieher v. Brown*, 54 Ill. 2d 539, 301 N.E.2d 307 (1973). See also *Nanda v. Ford Motor Co.*, 509 F.2d 213, 218 (7th Cir. 1974); *Lenox, Inc. v. Triangle Auto Alarm*, 738 F. Supp. 262, 267 (N.D. Ill. 1990). In *Mieher* and *Cunis*, the Illinois Supreme Court interpreted a passage in an article by Professor Prosser stating that highly extraordinary events for section 435(2) purposes should be "bizarre, unique," or "freakish and . . . fantastic." *Cunis*, 56 Ill. 2d at 378, 308 N.E.2d at 620; *Mieher*, 54 Ill. 2d at 545, 301 N.E.2d at 310;

This Comment analyzes the application of section 435(2) in tort law with special emphasis upon its potential for use in toxic tort cases. Section II discusses the background of hazardous waste litigation in this country. Section II also sets forth the shortcomings in the United States tort doctrines and legislation presently available to deal with the problems of personal injuries caused by hazardous wastes.¹¹ Section III presents an introduction of basic tort principles of causation in negligence actions.¹² Section IV examines the history of section 435(2) and its varied applications.¹³ Section V introduces a hazardous waste tort case in which section 435(2) played a determinative role.¹⁴ Finally, section VI analyzes the potential use of 435(2) in toxic tort cases and sets forth factors to be considered by the court before applying section 435(2).¹⁵

II. BACKGROUND OF HAZARDOUS WASTE TORT LITIGATION IN THE UNITED STATES

Hazardous waste pollution creates a serious health risk to millions of people.¹⁶ Pollution causes or contributes to a large and increasing number of deaths or serious debilitations from cancer, nervous system disorders, or respiratory ailments.¹⁷ The federal government has made progress by enacting and enforcing legislation to both regulate waste disposal and effectuate a hazardous waste cleanup program.¹⁸ Despite these actions to regulate waste disposal and

Prosser, *Palsgraf Revisited*, 52 MICH. L. REV. 1, 27 (1953) [hereinafter Prosser]. However, in this passage of *Palsgraf Revisited*, Prosser actually recommends a "middle ground between the restricted scope of the original risk on the one hand and the extreme lengths to which even direct causation may be carried on the other, . . . some reasonably close connection between the harm threatened and the harm done." Prosser, *supra*, at 27. Prosser also stated that "the basic idea [behind the *Restatement (Second) of Torts* § 435(2)] is there, that liability must stop somewhere short of the freakish and the fantastic." *Id.*

¹¹ See *infra* notes 16-44 and accompanying text.

¹² See *infra* notes 45-111 and accompanying text.

¹³ See *infra* notes 112-71 and accompanying text.

¹⁴ See *infra* notes 172-207 and accompanying text.

¹⁵ See *infra* notes 208-60 and accompanying text.

¹⁶ Billions of pounds of hazardous waste are released into the environment every year. M. BROWN, *LAYING WASTE: THE POISONING OF AMERICA BY TOXIC CHEMICALS* 293 (1980). Studies have found that environmental factors cause 70% to 90% of all cancers. S. EPSTEIN, *THE POLITICS OF CANCER* 2 (1978); Comment, *supra* note 2, at 798.

¹⁷ See Comment, *supra* note 2, at 798.

¹⁸ See, e.g., Toxic Substances Control Act (ToSCA), 15 U.S.C. §§ 2601-71 (1990); Clean Water Act, 33 U.S.C. §§ 1251-1387 (1990); Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6992k (1990); Clean Air Act, 42 U.S.C. §§ 7401-7641 (1990); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675 (1990).

encourage waste cleanup, Congress has not passed any legislation providing a regulated system of compensation for personal injuries that result from toxic pollution.¹⁹

In a compromise for dropping personal injury compensation provisions from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),²⁰ Congress created a study group to recommend changes in the legal system to reduce the difficulties that victims personally injured by hazardous wastes face in trying to recover adequate compensation.²¹ The study group found many obstacles to recovery for the toxic tort plaintiff.²² They found that high causation standards, difficult and uncertain burdens of proof, scientific uncertainty, restrictive statutes of limitations, unidentified or insolvent defendants, inadequate insurance coverage, and prohibitively high litigation costs all combine to prevent toxic tort plaintiffs from recovering.²³ To eliminate some of these obstacles, the study group recommended modifications in the present toxic tort system.²⁴ Actions to improve the tort system could include enacting, on the federal or state level, a discovery rule for statutes of limitation purposes and a rule of strict liability for responsible parties.²⁵ Furthermore, some commentators have proposed that the

¹⁹ Frost, *Superfund Issues*, in TOXIC TORTS: LITIGATION IN HAZARDOUS SUBSTANCE CASES 269, 296 (G. Nothstein ed. 1984). Congress has voted upon bills that would have created a system to promote compensation for personal injury hazardous waste victims. Congress, however, did not pass the bills into law. *E.g.*, 131 CONG. REC. 411, 574-86 (daily ed. Dec. 10, 1985); see Comment, *supra* note 2, at 806-07; *Developments*, *supra* note 2, at 1602.

²⁰ CERCLA, 42 U.S.C. §§ 9601-9675 (1990).

²¹ *Id.* at § 9651(e). See H.R. REP. NO. 253(I), 99th Cong., 1st Sess. 84-90, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS 2866-72 [hereinafter *House Report on SARA*].

²² *Id.*

²³ SUPERFUND SECTION 301(E) STUDY GROUP, 97TH CONG., 2D SESS., INJURIES AND DAMAGES FROM HAZARDOUS WASTES—ANALYSIS AND IMPROVEMENT OF LEGAL REMEDIES, A REPORT TO CONGRESS IN COMPLIANCE WITH SECTION 301(E) OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 273 (Comm. Print 1982) [hereinafter STUDY GROUP REPORT]; Grad, *Remedies for Injuries Caused by Hazardous Waste: The Report and Recommendations of the Superfund 301(e) Study Group*, 14 *Env'tl. L. Rep. (Env'tl. L. Inst.)* 10,105 (1984).

²⁴ See STUDY GROUP REPORT, *supra* note 23; Frost, *supra* note 19, § 10.17, at 297-99. Numerous commentators have discussed and suggested solutions similar to those recommended by the study group. See, *e.g.*, *Developments*, *supra* note 2, at 1602; Brennan, *supra* note 8, at 469.

²⁵ See STUDY GROUP REPORT, *supra* note 23. A discovery rule would allow the statute of limitation period to begin tolling when plaintiffs discover their particular injury and not when the act causing the injury occurred. *Id.* at 240-41. Some states have recognized that hazardous waste injuries can have long latency periods and have adopted a discovery rule for persons injured by hazardous wastes. *Id.*; see, *e.g.*, KAN. STAT. ANN. §§ 60-513, 60-3303 (1988); KAN. H.B. § 2689 (1990); MO. ANN. STAT. § 516.100 (Vernon 1989). A strict liability standard would hold defendants liable for all injuries resulting from their handling of hazardous waste. Two

creation of an administrative board for the compensation of victims of hazardous substance pollution, acting much like the worker's compensation system, would improve the situation.²⁶

In 1986, Congress enacted the Superfund Amendments and Reauthorization Act (SARA).²⁷ In approving the provisions of SARA, Congress again chose not to enact federal law to deal with personal injury compensation.²⁸ SARA, however, contained provisions intended to lessen the hardships upon plaintiffs suffering personal injuries caused by hazardous wastes.²⁹ For example, SARA authorized the creation of an administrative body, the Agency for Toxic Substances and Disease Registry (ATSDR), which performs health assessments and conducts toxicity studies of hazardous wastes and their disposal sites.³⁰ Moreover, Congress designed this research program to provide the public with toxicological information and risk potentials that can help plaintiffs meet their burden of proof in lawsuits.³¹ Federal regulations, however, still fall short of creating

elements that are often difficult for a plaintiff to prove, foreseeability and the defendant's knowledge of the risk they were creating, would be irrelevant under a strict liability standard. See *Developments*, *supra* note 2, at 1611-17. Such a strict liability standard would attempt to place the burden of the costs of hazardous waste injuries and the risks of harm on the hazardous waste handlers instead of on the injured parties. *Id.* at 1611.

²⁶ Soble, *A Proposal for the Administrative Compensation of Victims of Toxic Substance Pollution: A Model Act*, 14 HARV. J. ON LEGIS. 683, 730 (1977); *Developments*, *supra* note 2, at 1631-37. A recurring complaint in toxic tort cases is the large amount of scientific evidence that is necessary. Soble, *supra*, at 706. This evidence is often too complicated for a lay jury to comprehend. An administrative body created to deal with hazardous waste victims would be made up of experts in the hazardous waste field so that claims would be dealt with quickly and efficiently. *Developments*, *supra* note 2, at 1633-34. Under such a plan, all citizens—not just workers—could be entitled to compensation for injuries caused by hazardous substances. Soble, *supra*, at 718-19.

²⁷ Superfund Amendments and Reauthorization Act (SARA) Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified as amended in scattered sections of 42 U.S.C. §§ 9601-9675 (1990)). For SARA's history, see *House Report on SARA*, *supra* note 21, at 84-90, *reprinted in* 1986 U.S. CODE CONG. & ADMIN. NEWS at 2835.

²⁸ Representative Barney Frank submitted a SARA amendment that would have given personal injury victims of hazardous wastes a right to sue in federal court under the Superfund. H.R. 3852, 99th Cong., 1st Sess., 131 CONG. REC. H11,574 (1985). The amendment was defeated in the House of Representatives by a vote of 162 to 261. *Id.* at H11,585-86. Those opposed to the amendment argued that the current victim compensation tort remedies are adequate, that the creation of a federal cause of action would place an excessive insurance burden on parties responsible for hazardous wastes, and that such an amendment would cause an excessive amount of civil litigation in the federal courts. *Id.* at H11,575-85.

²⁹ See, e.g., 42 U.S.C. § 9604 (1990); *House Report on SARA*, *supra* note 21, at 84-90, *reprinted in* 1986 U.S. CODE CONG. & ADMIN. NEWS at 2835, 2866-72.

³⁰ 42 U.S.C. § 9604(i).

³¹ *House Report on SARA*, *supra* note 21, at 84-90, *reprinted in* 1986 U.S. CODE CONG. & ADMIN. NEWS at 2835, 2866-72.

a private cause of action for personal injury damages caused by hazardous wastes.³²

Like the federal government, most states also have declined to adopt hazardous waste personal injury compensation statutes.³³ Some states, however, including Alaska, California, Minnesota, and New Jersey, have passed legislation related to compensation for hazardous waste victims.³⁴ This legislation greatly contributes to victim recovery, but it still has only limited applications.³⁵ Because most states still refuse to create statutory causes of actions for toxic tort victims, almost all victims of hazardous wastes are left to seek damages solely on a common law tort basis.³⁶

A plaintiff claiming damages for a toxic tort can attempt to bring a common law action applying any or all of the following theories of liability: trespass, negligence, nuisance, or strict liability.³⁷ Most plaintiffs claiming personal injury from hazardous wastes must attempt to prove that the defendant was negligent.³⁸ To prevail on a

³² Representative Glickman stated that it is better not to have a federal cause of action for persons injured by hazardous wastes. H.R. 3852, 99th Cong., 1st Sess., 131 CONG. REC. H11,577 (1985). See *supra* note 28. A majority of the House of Representatives demonstrated their agreement with Representative Glickman by defeating the bill that was presented by Barney Frank to establish a federal statutory remedy for hazardous waste personal injuries. H.R. 3852, 99th Cong., 1st Sess., 131 CONG. REC. at H11,585-86 (1985).

³³ *Developments, supra* note 2, at 1602.

³⁴ See ALASKA STAT. § 46.03.822 (1987); The Carpenter-Presley-Tanner Hazardous Substance Account Act of 1981 (the California Superfund), CAL. HEALTH & SAFETY CODE §§ 25,300-25,395 (West 1989); MINN. STAT. ANN. § 115B.05 (West 1987); N.J. STAT. ANN. § 13:1E-62 (West 1987); N.C. GEN. STAT. §§ 143.215.75-.98 (1990). The fact that an increasing number of states are adopting statutes to deal with hazardous waste personal injury claims may indicate a trend. Other states and perhaps even the United States Congress may follow their lead.

³⁵ See CAL. HEALTH & SAFETY CODE §§ 25,300-25,395 (West 1989). The California Superfund creates an account funded by hazardous waste taxes to pay some of the damages claimed by a party injured by hazardous wastes. *Id.* § 25,372. Damages are limited to uninsured medical expenses and 80% of lost wages to a limit of \$15,000 per year for three years. *Id.* § 25,375. The fund does not cover damages from long-term exposure to air pollutants, and claimants must prove that they are not able to obtain a court judgment against a responsible party because the responsible party either does not exist, is unknown and cannot be discovered with due diligence, or is insolvent or otherwise cannot satisfy a judgment. *Id.* §§ 25,372, 25,375. Uncharacteristic of most states, Minnesota enacted a statute that holds all who are responsible for the release of hazardous substances strictly liable for all damages including death, personal injury, and disease. MINN. STAT. ANN. § 115B.05 (West 1987). Various statutory defenses, however, are available to the defendant, and the statute applies only to hazardous wastes defined by the Clean Water Act, 33 U.S.C. § 1321(b)(2)(a) (1990). *Id.*

³⁶ *Developments, supra* note 2, at 1602.

³⁷ See Pollan, *Theories of Liability*, in TOXIC TORTS: LITIGATION IN HAZARDOUS SUBSTANCE CASES 301 (G. Nothstein ed. 1984).

³⁸ Most courts consistently have determined that hazardous waste generation or disposal is either not ultrahazardous activity or does not involve the requisite intent to invoke the application of strict liability. *Id.* at 318-24; see, e.g., *Anderson v. W.R. Grace & Co.*, No. 82-

negligence claim, the plaintiff must prove four distinct elements.³⁹ First, the plaintiff must establish that the defendant owed a duty of due care to the plaintiff.⁴⁰ Second, the plaintiff must prove that the defendant breached the duty.⁴¹ Third, the plaintiff must convince the factfinder that the plaintiff suffered actual damages due to defendant's breach of duty of due care.⁴² Fourth, the plaintiff must show that the defendant's breach was the cause of the plaintiff's damage.⁴³ Causation is the element that creates the greatest misunderstanding among those involved in toxic tort litigation.⁴⁴

III. PRINCIPLES OF CAUSATION IN TORT LAW

A. Causation Generally

Causation is based upon an analysis of the link between act and consequence. Viewed from a philosophical perspective, any act causes an infinite number of consequences.⁴⁵ Following this perspective to its logical extreme, one commentator reasoned that "the fatal trespass done by Eve was cause of all our woe."⁴⁶ It is well settled

1672-S (D. Mass. Sept. 17, 1986), *aff'd sub nom.* Anderson v. Cryovac, 862 F.2d 910 (1st Cir. 1988); Ewell v. Petro Processors, Inc., 364 So. 2d 604, 606-07 (La. Ct. App. 1978), *cert. denied*, 366 So. 2d 575 (La. 1979); *Developments*, *supra* note 2, at 1610. As a result, without a statutory strict liability scheme, these courts have refused to apply strict liability in most cases claiming that hazardous wastes caused personal injuries. *See, e.g.,* Anderson, No. 82-1672-S, slip op. at 3-4; Ewell v. Petro Processors of La., 364 So. 2d 604, 606-07 (La. Ct. App. 1978), *cert. denied*, 366 So. 2d 575 (La. 1979); Bagley v. Controlled Env't Corp., 127 N.H. 556, 558-61, 503 A.2d 823, 825-27 (1986). *See also supra* note 25 and accompanying text.

Some courts have determined, however, that the severe toxicity of the hazardous waste for which the defendant was responsible called for the application of strict liability. *See* Ashland Oil, Inc. v. Miller Oil Purchasing Co., 678 F.2d 1293, 1307-08 (5th Cir. 1982); State, Dep't of Env'tl. Protection v. Ventron Corp., 94 N.J. 473, 488, 468 A.2d 150, 157 (1983).

Although a plaintiff may prevail on nuisance or trespass claims, the plaintiff still must prove that the defendant acted intentionally or negligently. *See Developments*, *supra* note 2, at 1610-11. Nuisance and trespass are tort doctrines designed to deal primarily with property and not personal injury damages. *Developments*, *supra* note 2, at 1610. *But see* Nitram Chems., Inc. v. Parker, 200 So. 2d 220, 225 (Fla. Dist. Ct. App. 1967) (nuisance claim in which plaintiff recovered damages for personal injuries); Rogers v. Kent Bd. of County Rd. Comm'rs, 319 Mich. 661, 666-67, 30 N.W.2d 358, 359-60 (1948) (plaintiff recovered for personal injuries in a trespass claim).

³⁹ W. PROSSER & W. KEETON, *supra* note 2, § 30, at 164-65.

⁴⁰ *Id.* at 164.

⁴¹ *Id.*

⁴² *Id.* at 165.

⁴³ *Id.*

⁴⁴ *See id.* § 41, at 263.

⁴⁵ *See* James & Perry, *Legal Cause*, 60 YALE L.J. 761 (1951).

⁴⁶ *Id.* at 761.

that defendants should not be legally responsible for every consequence linked in any way to their wrongful conduct.⁴⁷ An essential element of a negligence cause of action is that there must be a reasonable connection between the defendant's conduct and the damage to the plaintiff.⁴⁸ A finding of liability for negligence must be based on fault.⁴⁹ Proximate causation sets rational boundaries in order to determine liability according to factors like the culpability of the defendant and the strength of the link between acts and consequences.⁵⁰

Liability may be found only when there is a certain threshold relation between the defendant's conduct and the plaintiff's injuries.⁵¹ In defining that threshold relation, a court applies a causation-in-fact analysis to determine who or what caused an action and a proximate cause analysis to determine who should pay for the harmful consequences of such an action.⁵² These rules of causation, however, have been given varying interpretations according to the judgment of the court and policy considerations.⁵³ Much of the decision-making process regarding causation has been left to the discretion of the factfinder to determine whether the link between the defendant's conduct and the plaintiff's harm is great enough to hold the defendant liable.⁵⁴

⁴⁷ See *Cole v. Duke Power Co.*, 81 N.C. App. 213, 344 S.E.2d 130, 136 (1986) (citing *Phelps v. City of Winston-Salem*, 272 N.C. 24, 30, 157 S.E.2d 719, 723 (1967)); W. PROSSER & W. KEETON, *supra* note 2, § 41, at 264; Calabresi, *Concerning Cause and the Law of Torts: An essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69, 71-72 (1975).

⁴⁸ *Todd Shipyards Corp. v. Turbine Serv., Inc.*, 467 F. Supp. 1257, 1288 (E.D. La. 1978); W. PROSSER & W. KEETON, *supra* note 2, § 41, at 263.

⁴⁹ See W. PROSSER & W. KEETON, *supra* note 2, § 41, at 264, § 42, at 273; F. HARPER, *supra* note 5, § 20.4, at 131.

⁵⁰ See F. HARPER, *supra* note 5, § 20.4, at 131.

⁵¹ See *Gallick v. Baltimore & Ohio R.R.*, 372 U.S. 108, 112 (1963); W. PROSSER & W. KEETON, *supra* note 2, § 41, at 264, § 42, at 273; F. HARPER, *supra* note 5, § 20.4, at 131.

⁵² See W. PROSSER & W. KEETON, *supra* note 2, § 41, at 264-65; Vinson, *Proximate Cause Should Be Barred from Wandering Outside Negligence Law*, 13 FLA. ST. U.L. REV. 215 (1985).

[I]t's one kind of job to trace empirically the history of this planet's pollution (cause in fact) back to the ape who crawled down a tree, urinated in a stream, and first began upsetting nature's balance. It's quite another job to select, among a jungle of contributing factors, which polluting apes deserve fine or jail for contaminating Mother Earth.

Vinson, *supra*, at 215.

⁵³ W. PROSSER & W. KEETON, *supra* note 2, § 41, at 263-64. In his dissent to *Palsgraf v. Long Island Railroad*, Judge Andrews stated that, although decisions should be made that are "practical and in keeping with the general understanding of [humanity]," there is "little to guide us other than common sense." 248 N.Y. 339, 354-55, 162 N.E. 99, 104 (1928) (Andrews, J., dissenting).

⁵⁴ See W. PROSSER & W. KEETON, *supra* note 2, § 42, at 272-73. A court often first

Causation-in-fact determinations are essential to a finding of legal causation and usually are made before examining proximate causation.⁵⁵ Causation-in-fact exists if the damage to the plaintiff would not have occurred "but for" the defendant's conduct.⁵⁶ Alternatively, causation-in-fact may be found if it is "more likely than not" that the defendant's conduct was a substantial factor in producing the plaintiff's injuries.⁵⁷ Today, courts generally apply this more-likely-than-not substantial factor rule to all determinations of causation-in-fact.⁵⁸

The District Court for the District of Utah took a different approach to causation-in-fact determinations in *Allen v. United States*.⁵⁹ The court applied a liberal substantial factor test to establish that the defendant's unreasonable creation of risk by exposing the plaintiffs to ionizing radiation was a cause of the injuries, including cancer, suffered by the plaintiffs.⁶⁰ Although the decision of the district court was reversed on the grounds of sovereign immunity, the case sets forth important principals of causation.⁶¹ The court rejected the use of "but for" or "more likely than not" tests and found that the defendant caused the plaintiffs' injuries because a substantial "causal linkage" existed between the defendant's unreasonable contribution to a risk of injury and the plaintiffs' actual injuries.⁶² The court applied this substantial-causal-linkage test,

determines causation-in-fact issues to establish whether some nexus between a defendant's conduct and the plaintiff's injury exists. If causation-in-fact is established, the court then makes findings regarding proximate cause to determine whether the nexus is reasonably sufficient for the defendant to be held liable. *Id.*

⁵⁵ *Id.*

⁵⁶ W. PROSSER & W. KEETON, *supra* note 2, § 41, at 266-68.

⁵⁷ *Id.* at 268-69; RESTATEMENT (SECOND) OF TORTS §§ 431-432 (1965). The "substantial factor" test was applied first to deal with cases involving the possibility of multiple causes. In *Anderson v. Minneapolis, St. Paul & Sault Ste. Marie Railway*, 146 Minn. 430, 179 N.W. 45 (1920), two defendants each negligently started a separate uncontrollable fire that combined and damaged the plaintiff's property. *Id.* at 436-37, 179 N.W. at 47. Applying "but for" causation would have allowed both defendants to escape liability for their negligent conduct because each defendant could argue that the plaintiff would have been damaged even if either one of the negligently started fires never occurred. The substantial factor rule thus was applied to hold both responsible parties liable. *Id.*; see RESTATEMENT (SECOND) OF TORTS § 431 comment a (1965).

⁵⁸ See W. PROSSER & W. KEETON, *supra* note 2, § 41, at 267.

⁵⁹ 588 F. Supp. 247, 260 (D. Utah 1984), *rev'd*, 816 F.2d 1417 (10th Cir. 1987), *cert. denied*, 484 U.S. 1004 (1988) (the Court of Appeals for the Tenth Circuit reversed the district court opinion on the grounds of sovereign immunity).

⁶⁰ *Id.* The district court judge stated that "[i]n the pragmatic world of 'fact' the court passes judgment on the probable. Dispute resolution demands rational decision, not perfect knowledge." *Id.*

⁶¹ *Allen*, 816 F.2d at 1424.

⁶² *Allen*, 588 F. Supp. at 260.

rather than the more common more-likely-than-not causation test, to determine causation-in-fact because there were many factors that could cause or influence the toxic tort injuries in question.⁶³ Once a court finds that a defendant's conduct was a cause-in-fact of the plaintiff's injury, the court then must determine whether the defendant should be held legally responsible for the plaintiff's injury.⁶⁴

Courts have developed the legal doctrine of proximate cause to evaluate the varied causes-in-fact of an event and incorporate policy considerations into liability determinations.⁶⁵ Proximate cause is a policy-oriented doctrine designed to be a method for limiting liability after cause-in-fact has been established.⁶⁶ Courts may consider many different factors in determining proximate cause.⁶⁷ For example, courts have considered the foreseeability of consequences, the reasonableness of the defendant's conduct in relation to foreseeable risks, the directness between the causal links, and the existence of abnormal intervening forces in proximate cause decisions.⁶⁸

B. Foreseeability in Torts

Although foreseeability plays an important role in negligence determinations, the exact role it plays is unclear.⁶⁹ The role of foresee-

⁶³ *Id.* See Note, *The Inapplicability of Traditional Tort Analysis to Environmental Risks: The Example of Toxic Waste Pollution Victim Compensation*, 35 STAN. L. REV. 575, 583-84 (1983).

⁶⁴ *Allen*, 588 F. Supp. at 260; see W. PROSSER & W. KEETON, *supra* note 2, § 42, at 272-73; Malone, *Ruminations on Cause-In-Fact*, 9 STAN. L. REV. 60, 72-75 (1956); Thode, *The Indefensible Use of the Hypothetical Case to Determine Cause-In-Fact*, 46 TEX. L. REV. 423, 434 (1968). See also Keeton, *Causation*, 28 S. TEX. L.J. 231, 232 (1986). "Factual causation refers to the requirement that the act and the injury be related. Legal causation refers to the requirement that the act and the injury be reasonably related." *Id.*

⁶⁵ W. PROSSER & W. KEETON, *supra* note 2, § 41, at 264; Brennan, *supra* note 8, at 484. Many cases have found that fairness and policy considerations must enter into causation assessments. See, e.g., *Finney v. Ren-Bar, Inc.*, 229 N.J. Super. Ct. 295, 302, 551 A.2d 535, 539 (1988) (citing *Griesenback by Kuttner v. Walker*, 199 N.J. Super. Ct. 132, 139, 488 A.2d 1038, 1042 (1965)).

⁶⁶ Some of the public policy considerations applied to relieve of liability a party whose conduct was a substantial factor in causing harm include: the remoteness of the injury from the negligence, the extent to which the injury is out of proportion to the negligent party's culpability, the unreasonableness of the burden upon the tortfeasor if recovery were allowed, the precedential effect in promoting fraudulent claims or in entering a field where there would be no reasonable stopping point, or the highly extraordinary nature of the negligent act bringing about the harm. *Morgan v. Pennsylvania Gen. Ins. Co.*, 87 Wis. 2d 723, 737, 275 N.W.2d 660, 667 (1979).

⁶⁷ See *id.*

⁶⁸ See *id.*; W. PROSSER & W. KEETON, *supra* note 2, §§ 42-44; *Palsgraf v. Long Island R.R.*, 248 N.Y. 339, 347-56, 162 N.E. 99, 101-05 (1928) (Andrews, J., dissenting).

⁶⁹ See F. HARPER, *supra* note 5, § 20.5, at 133-37; Morris, *Proximate Cause in Minnesota*,

ability should depend, to a great extent, upon our thoughts about just limits to legal responsibility in any particular case.⁷⁰ The wide variety of applications for foreseeability in negligence cases demonstrates its uncertain role.⁷¹

Some courts have found that foreseeability is irrelevant to causation determinations.⁷² Tort theorist Leon Green stated that foreseeability or probability considerations confuse causation and should be applied only to damage questions.⁷³ Green would sum up the negligence determination into a duty formula stated as follows: "Should probable harm to the interests involved have been reasonably anticipated as within the range of defendant's conduct?"⁷⁴ According to this view, the determination whether the defendant breached a duty to the plaintiff is seen separately from causation determinations.⁷⁵

Courts often apply foreseeability in determining whether the plaintiff was a party to whom the defendant owed a duty to exercise reasonable care.⁷⁶ These courts have found that if the jury deter-

34 MINN. L. REV. 185, 197 (1950) ("Attempts to escape from the significance of foresight in the field of legal remoteness are attempts to escape our culture."); Annotation, *supra* note 2, at 945. See also *Young v. Tide Craft, Inc.*, 270 S.C. 453, 462, 242 S.E.2d 671, 675 (1978). The Court of Appeals for the Fifth Circuit has stated that "[f]ew areas of tort law are as beset with the potential for confusion as is that of foreseeability." *Hall v. Atchison, Topeka and Santa Fe Ry.*, 504 F.2d 380, 385 (5th Cir. 1974).

⁷⁰ F. HARPER, *supra* note 5, § 20.5, at 137.

⁷¹ See, e.g., *Nelson by Tatum v. Com. Edison Co.*, 124 Ill. App. 3d 655, 659, 465 N.E.2d 513, 517 (1984); *Little v. York County Earned Income Tax Bureau*, 333 Pa. Super. 8, 13-17, 481 A.2d 1194, 1197-98 (1984), *appeal dismissed*, 510 Pa. 531, 531-32, 510 A.2d 351, 351-52 (1986); *Brown v. Tinneny*, 280 Pa. Super. 512, 514-22, 421 A.2d 839, 841-44 (1980) (citing *Zilka v. Sanctis Constr., Inc.*, 409 Pa. 396, 400, 186 A.2d 897, 898-99, *cert. denied*, 374 U.S. 850 (1962)); *Wells v. Vancouver*, 77 Wash. 2d 800, 805, 467 P.2d 292, 296 (1970); see also W. PROSSER & W. KEETON, *supra* note 2, § 42, at 273.

⁷² See, e.g., *Mazzagatti v. Everingham by Everingham*, 512 Pa. 266, 282, 516 A.2d 672, 680 (1986) (Flaherty, J., concurring); L. GREEN, *supra* note 1, at 65. Foreseeability, if not applied in causation determinations, most likely will be applied in other determinations, such as duty, breach of duty, or damages. F. HARPER, *supra* note 5, § 20.5, at 137.

⁷³ L. GREEN, *supra* note 1, at 65.

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ E.g., *Martinez v. Teague*, 96 N.M. 446, 452, 631 P.2d 1314, 1319 (1981); *Little*, 333 Pa. Super. at 13-17, 481 A.2d at 1197-98; *Brown*, 280 Pa. Super. at 514-22, 421 A.2d at 841-44 (citing *Zilka v. Sanctis Constr., Inc.*, 409 Pa. 396, 400, 186 A.2d 897, 898-99, *cert. denied*, 374 U.S. 850 (1962)). In *Martinez*, the court held that "foreseeability is not an element to be considered in determining whether negligent conduct was the proximate cause of an accident. 96 N.M. at 452, 631 P.2d at 1319. Compare *Martinez*, 96 N.M. at 452, 631 P.2d at 1319 with *Nelson*, 124 Ill. App. 3d at 659, 465 N.E.2d at 517. In *Nelson* the court found that foreseeability is to be used by a trial judge only in determining threshold questions of duty, but can be considered by a jury in its factual proximate cause determinations. *Id.*

mines that the actor's conduct was a negligent breach of a duty owed to the plaintiff, then the foreseeability and extraordinariness of that harm are no longer issues.⁷⁷ Under this interpretation, foreseeability is an issue for the factfinder only in determining whether the defendant owed a duty to the plaintiff, and it is not to be considered in relation to determining proximate causation unless in hindsight the harm to the plaintiff was so unforeseeable that it appears highly extraordinary.⁷⁸ Thus, a court usually will hold a negligent actor liable for all the harm resulting from the actor's negligence, whether foreseeable or not, unless in retrospect the chain of events appears highly extraordinary.⁷⁹

Courts also have held that foreseeability is indispensable to proximate cause determinations.⁸⁰ The Supreme Court of South Carolina, for instance, has deemed foreseeability "the touchstone of proximate cause."⁸¹ Thus, foreseeability has been important in determining the extent to which defendants should be held accountable for their negligent conduct.⁸²

It is clear that foreseeability can play different roles in negligence determinations. It has been applied to both determinations of the scope of "the duty owed"⁸³ and proximate causation.⁸⁴ Although the methods used in fashioning some form of foreseeability test may

⁷⁷ *Martinez*, 96 N.M. at 452, 631 P.2d at 1319; *Brown*, 280 Pa. Super. at 519-21, 421 A.2d at 843; see RESTATEMENT (SECOND) OF TORTS § 435(1) (1965).

⁷⁸ *Martinez*, 96 N.M. at 452, 631 P.2d at 1319; *Little*, 333 Pa. Super. at 13-17, 481 A.2d at 1197-98; *Brown*, 280 Pa. Super. at 521, 421 A.2d at 844.

⁷⁹ *Morgan v. District of Columbia*, 449 A.2d 1102, 1110-11 (D.C. 1982), *vacated on other grounds*, 452 A.2d 1197 (D.C. 1983), *aff'd en banc*, 468 A.2d 1306 (D.C. 1983); *Lacy v. District of Columbia*, 424 A.2d 317, 320-21 (D.C. 1980); see RESTATEMENT (SECOND) OF TORTS § 435 (1965).

⁸⁰ See, e.g., *Hueston v. Narragansett Tennis Club, Inc.*, 502 A.2d 827, 830 (R.I. 1986).

⁸¹ *Young v. Tide Craft, Inc.*, 270 S.C. 453, 462, 242 S.E.2d 671, 675 (1978). In this case, the harm to the plaintiff was unforeseeable and not a natural and probable consequence of the defendant's conduct. *Id.* at 465-66, 242 S.E.2d at 675.

⁸² *Rossell v. Volkswagen of America*, 147 Ariz. 160, 168-69, 709 P.2d 517, 525-26 (1985), *cert. denied*, 476 U.S. 1108 (1986). In *Rossell* the court found that the defendant car manufacturer's placement of a battery system in the passenger compartment of the vehicle caused the plaintiff to be burned by battery acid when the vehicle rolled over during an accident. *Id.* at 169-70, 709 P.2d 526-27. The court refused to find that the replacement of the original battery with a much larger one interrupted the causal link between manufacturer's negligence and plaintiff's injury. *Id.* The court deemed such a replacement of the battery foreseeable. *Id.*

⁸³ E.g., *Nelson by Tatum v. Com. Edison Co.*, 124 Ill. App. 3d 655, 659, 465 N.E.2d 513, 517 (1984); *Martinez v. Teague*, 96 N.M. 446, 452, 631 P.2d 1314, 1319 (1981); *Brown v. Tinneney*, 280 Pa. Super. 512, 518-22, 421 A.2d 839, 843-44 (1980).

⁸⁴ E.g., *Rossell*, 147 Ariz. at 168-69, 709 P.2d at 525-26; *Hueston*, 502 A.2d at 830; *Young*, 270 S.C. at 462, 242 S.E.2d at 675.

differ, the principle remains the same: liability will extend only to a reasonable limit.⁸⁵

Whether the foreseeability test is treated as a question of duty, negligence, or proximate cause, a plaintiff needs only prove that a defendant could have foreseen some harm resulting from his or her conduct.⁸⁶ Liability can be found even if the defendant "neither foresaw nor should have foreseen the extent of the harm or the manner in which it occurred."⁸⁷ When it is more likely than not that a defendant acted negligently, then the defendant is liable for all harm that is a natural and probable consequence of that conduct.⁸⁸ When straightforward causation links are not present, or when the natural and probable consequences of a defendant's conduct are unclear, problems arise in determining whether liability should be found.⁸⁹

C. *Palsgraf v. Long Island Railroad Company*

In the landmark case *Palsgraf v. Long Island Railroad Co.*⁹⁰ the New York Court of Appeals wrestled with the question of the proper extent of liability to be imposed in a case in which the circumstances appeared extraordinary.⁹¹ *Palsgraf* created an enormous amount of discussion and reevaluation of the rules of negligent causation.⁹² In *Palsgraf*, guards on a Long Island Railroad train assisted a man boarding the moving train and in so doing dislodged a nondescript package from the man's arms.⁹³ The package contained fireworks

⁸⁵ *Nelson*, 124 Ill. App. 3d at 659, 465 N.E.2d at 519; *B.N. v. K.K.*, 312 Md. 135, 139, 538 A.2d 1178, 1181 (1988) (the foreseeability test, whether in the context of causation or duty, "is intended to reflect current societal standards with respect to an acceptable nexus between the negligent act and the ensuing harm").

⁸⁶ *Sweargin v. Sears Roebuck & Co.*, 376 F.2d 637, 642 (10th Cir. 1967); *Hueston*, 502 A.2d at 830; see also W. PROSSER & W. KEETON, *supra* note 2, §§ 42-44.

⁸⁷ RESTATEMENT (SECOND) OF TORTS § 435(1) (1965).

⁸⁸ W. PROSSER & W. KEETON, *supra* note 2, § 43, at 282.

⁸⁹ See W. PROSSER & W. KEETON, *supra* note 2, §§ 42-44. See generally *Palsgraf v. Long Island R.R.*, 248 N.Y. 339, 162 N.E. 99 (1928).

⁹⁰ 248 N.Y. 339, 162 N.E. 99 (1928).

⁹¹ See *id.*

⁹² G. WHITE, *TORT LAW IN AMERICA: AN INTELLECTUAL HISTORY* 96-113 (1980).

⁹³ According to Judge Benjamin Cardozo, the facts of the case are as follows:

[The] [p]laintiff was standing on a platform of defendant's railroad after buying a ticket to go to Rockaway Beach. A train stopped at the station, bound for another place. Two men ran forward to catch it. One of the men reached the platform of the car without mishap, though the train was already moving. The other man, carrying a package, jumped aboard the car, but seemed unsteady as if about to fall. A guard on the car, who had held the door open, reached forward to help him in, and another guard on the platform pushed him from behind. In this act, the package was dislodged

that exploded when the package fell on the tracks.⁹⁴ The plaintiff, a prospective passenger waiting on the train platform, was injured when scales, toppled by the explosion, fell on her.⁹⁵

The plaintiff subsequently sued the railroad company for her injuries, which she claimed were caused by the negligence of the guards.⁹⁶ The trial court found the defendant's guards negligent and returned a verdict for the plaintiff.⁹⁷ The appellate division affirmed the trial court's verdict, holding that the conduct of the defendant's agents was a proximate cause of the plaintiff's injuries.⁹⁸ The appellate division found that the guards' inability to foresee injury to the plaintiff from their conduct could not be a defense.⁹⁹

The Court of Appeals of New York reversed the trial court's verdict and dismissed the plaintiff's case.¹⁰⁰ Writing the majority opinion, Chief Judge Cardozo stated that neither the guards nor the Long Island Railroad Company, which employed the guards, should be held liable for any and all natural and probable consequences of their conduct.¹⁰¹ The court ruled that the plaintiff was outside the foreseeable zone of risk created by the guards' conduct, and thus the defendant, as a matter of law, did not owe a duty of due care to the plaintiff.¹⁰² Because it was unforeseeable and extraordinary that the guard's conduct could injure a party so remotely connected to that conduct, the defendant could not be held liable.¹⁰³

Judge Andrews, in his dissent, argued that the negligent actors should have been liable for all of the natural and probable consequences of their negligent acts regardless of the fact that the con-

and fell upon the rails. It was a package of small size, about fifteen inches long, and was covered by a newspaper. In fact it contained fireworks, but there was nothing in its appearance that gave notice of its contents. The fireworks when they fell exploded. The shock of the explosion threw down some scales at the other end of the platform, many feet away. The scales struck the plaintiff, causing injuries for which she sues.

Palsgraf, 248 N.Y. at 340-41, 162 N.E. at 99.

⁹⁴ *Id.* at 341, 162 N.E. at 99.

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.* at 347, 162 N.E. at 101.

⁹⁸ *Palsgraf v. Long Island R.R.*, 222 App. Div. 166, 168, 225 N.Y.S. 412, 414 (1927), *rev'd*, 248 N.Y. 339, 347, 162 N.E. 99, 101 (1928).

⁹⁹ *Palsgraf*, 222 App. Div. at 168, 225 N.Y.S. at 413-14.

¹⁰⁰ *Palsgraf*, 248 N.Y. at 347, 162 N.E. at 101.

¹⁰¹ *Id.*

¹⁰² *Id.* at 345-47, 162 N.E. at 100-01. Judge Cardozo stated that "[t]he risk reasonably to be perceived defines the duty to be obeyed." *Id.* at 344, 162 N.E. at 100.

¹⁰³ *Id.* at 347, 162 N.E. at 101.

sequences were unusual or unforeseeable.¹⁰⁴ According to Judge Andrews, a prerequisite to liability is that the connection between act and consequence must be close enough for the act to be considered the proximate cause of the consequence.¹⁰⁵ Judge Andrews argued that only the remoteness of the plaintiff's injuries should act to limit liability rather than determinations as to whether the defendant owed a duty to the plaintiff.¹⁰⁶

Both Cardozo's and Andrews's opinions consistently have bewildered commentators.¹⁰⁷ Although the *Palsgraf* opinions received much criticism, they opened the floodgates for the application of policy considerations, proximate causation, and practical politics in negligence cases.¹⁰⁸ Proximate cause continues to be an important factor in negligence cases despite the fact that many have recognized proximate causation to be an overworked and undefined concept that is improperly designed to cover a multitude of sins.¹⁰⁹

The *Palsgraf* opinions espouse a general concept that liability shall not be found when the link between the defendant's conduct and the plaintiff's injury appears extremely tenuous.¹¹⁰ This concept has been embodied in section 435(2) of the *Restatement (Second) of Torts*.¹¹¹

IV. SECTION 435(2) OF THE *RESTATEMENT (SECOND) OF TORTS*

Public policy dictates that defendants should not be liable for the highly extraordinary consequences of their negligent conduct.¹¹² Sec-

¹⁰⁴ *Id.* at 350, 162 N.E. at 103 (Andrews, J., dissenting). In his dissent, Judge Andrews stated that "[e]very one owes to the world at large the duty of refraining from acts that may unreasonably threaten the safety of others." *Id.*; see also Prosser, *supra* note 10 at 6.

¹⁰⁵ *Palsgraf*, 248 N.Y. at 351, 162 N.E. at 103 (Andrews, J., dissenting).

¹⁰⁶ *Id.* at 348-49, 162 N.E. at 102 (Andrews, J., dissenting).

¹⁰⁷ G. WHITE, *supra* note 92, at 96-97, 101; Prosser, *supra* note 10, at 31. Prosser felt that, although eloquent, both opinions in *Palsgraf* shamelessly begged the question of tort liability for extraordinary consequences and stated "dogmatic propositions without reason or explanation." Prosser, *supra* note 10, at 7.

¹⁰⁸ *Id.* The popularity of the application of proximate causation primarily stemmed from Andrews's dissent. See *id.* Famous tort theorist Leon Green's comment that policy and the balancing of interests should be considered in judges' decisions without the necessity of making or following strict formulas was espoused by Andrews in *Palsgraf*. *Id.* See generally L. GREEN, *RATIONALE OF PROXIMATE CAUSE* (1927).

¹⁰⁹ W. PROSSER & W. KEETON, *supra* note 2, § 41, at 263-64.

¹¹⁰ See Prosser, *supra* note 10, at 31-32. For example, in *Barnes v. Gulf Power Co.* defendant was not responsible for failing to protect its own telephone repair personnel from the hazard of criminal assault by third parties. 517 So. 2d 717, 726 (Fla. Dist. Ct. 1987).

¹¹¹ *RESTATEMENT (SECOND) OF TORTS* § 435(2) (1965).

¹¹² See *Palsgraf v. Long Island R.R.*, 248 N.Y. 339, 354, 162 N.E. 99, 104 (1928) (Andrews, J., dissenting). Comment c of the *Restatement (Second) of Torts* § 435(2) provides:

tion 435(2) of the *Restatement (Second) of Torts* reflects that policy.¹¹³ In a negligence action, a court may follow the *Restatement* and hold that a defendant was not the legal cause of a plaintiff's injuries if, in looking at the circumstances retrospectively and applying hindsight, it appears highly extraordinary and unforeseeable that the plaintiff's injuries occurred as a result of the defendant's alleged tortious conduct.¹¹⁴

The role of section 435(2) is not clear.¹¹⁵ Changes made by the authors in drafting section 435(2) reflect the uncertainty about the section's proper role.¹¹⁶ The content of section 435(2) originally was listed in section 433(b) of the first *Restatement of Torts* as one of the considerations to be applied in determining whether the actor's conduct was a substantial factor in bringing about the plaintiff's harm.¹¹⁷ The drafters of the *Restatement (Second)* transferred section 433(b) to section 435(2) because section 433 contained factors to be applied

[T]he highly extraordinary nature of the result which has followed from the actor's conduct (with or without the aid of an intervening force) indicates that the hazard which brought about or assisted in bringing about that result was not among the hazards with respect to which the conduct was negligent.

RESTATEMENT (SECOND) OF TORTS § 435(2) comment c (1965).

¹¹³ Section 435(2) provides that "[t]he actor's conduct may be held not to be a legal cause of harm to another where after the event and looking back from the harm to the actor's negligent conduct, it appears to the court highly extraordinary that it should have brought about the harm." RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

¹¹⁴ *Id.*; see *Hoxsey v. Houchlei*, 135 Ill. App. 3d 176, 181, 481 N.E.2d 990, 993 (1985) (because of the "freakish nature of decedent's unfortunate accident . . . the accident would have been well outside the scope or range of such duty so as to render defendants not liable"). Compare *Hoxsey v. Houchlei*, 135 Ill. App. 3d 176, 481 N.E.2d 993 with *Ohoud Establishment, Inc. v. Tri-State Contracting and Trading Corp.*, 523 F. Supp. 249, 256 (D.N.J. 1981). In *Ohoud* section 435(2) was applied to determine whether damages claimed were so remote as to bar recovery of the speculative damages. *Id.*

¹¹⁵ See Annotation, *supra* note 2, at 986-88.

¹¹⁶ *Id.*

¹¹⁷ *Restatement of Torts* § 433 (1934) provided under the title "Considerations Important in Determining Whether Negligent Conduct Is a Substantial Factor in Producing Harm":

The following considerations are in themselves or in combination with one another important in determining whether the actor's conduct is a substantial factor in bringing about harm to another:

(a) the number of other factors which contribute in producing the harm and the extent of the effect which they have in producing it;

(b) whether after the event and looking back from the harm to the actor's negligent conduct it appears highly extraordinary that it should have brought about the harm;

(c) whether the actor's conduct has created a force or series of forces which are in continuous and active operation up to the time of the harm, or has created a situation harmless unless acted upon by other forces for which the actor is not responsible;

(d) lapse of time.

Id. The change made to section 433 involved only the removal of subsection b. The rest of the section remained the same. See RESTATEMENT (SECOND) OF TORTS §§ 433, 435 (1965).

in determining causation-in-fact. Thus, the "rule of policy" phrase of 433(b) confused the issues of fact required for determining substantial factor causation-in-fact with rules of policy intended to limit existing liability.¹¹⁸ It appears that such confusion still exists. Some courts continue to apply section 435(2) for causation-in-fact determinations,¹¹⁹ but most courts now recognize section 435(2) as a proximate-cause doctrine.¹²⁰

Case law demonstrates that there is uncertainty as to whether section 435(2) should apply to findings of causation-in-fact or to proximate-cause determinations.¹²¹ Some courts have found that the purpose of section 435(2) is to determine whether any liability exists at all and not to limit liability already found to exist.¹²² In these cases, the extraordinariness of the link between the defendant's conduct and the consequences of that conduct would be relevant for determining whether the defendant's conduct was negligent, but not for determining the extent of liability for which the defendant should be held accountable.¹²³

In *Mazzagatti v. Everingham by Everingham*,¹²⁴ for example, a concurring justice of the Pennsylvania Supreme Court found that section 435(2) and foreseeability have absolutely no place in any causation determinations and is solely for "duty" or "negligence" considerations.¹²⁵ This interpretation of section 435(2), however, does not seem to consider the fact that section 435 is listed in the *Restatement* as one of the rules for determining a negligent actor's responsibility for harm that the conduct already has been found to be a substantial factor in producing.¹²⁶

¹¹⁸ See Annotation, *supra* note 2, at 986-88.

¹¹⁹ See, e.g., *Martinez v. Teague*, 96 N.M. 446, 456, 631 P.2d 1314, 1324 (N.M. Ct. App. 1981); *Brown v. Tinnen*, 280 Pa. Super. 512, 514, 421 A.2d 839, 841 (1980).

¹²⁰ See, e.g., *Pisel v. Stamford Hosp.*, 180 Conn. 314, 341, 430 A.2d 1, 15 (1980); *Mitnick v. Whalen Bros.*, 115 Conn. 650, 651-52, 163 A. 414, 414-15 (1932); *Morgan v. District of Columbia*, 449 A.2d 1102, 1110-11 (D.C. 1982), *vacated on other grounds*, 452 A.2d 1197 (D.C.), *aff'd en banc*, 468 A.2d 1306 (D.C. 1983).

¹²¹ See Annotation, *supra* note 2, at 985-88.

¹²² *Martinez*, 96 N.M. at 451, 631 P.2d at 1319; *Brown*, 280 Pa. Super. at 514-15, 421 A.2d at 841.

¹²³ *Martinez*, 96 N.M. at 451, 631 P.2d at 1319; *Brown*, 280 Pa. Super. at 514-15, 421 A.2d at 841.

¹²⁴ 512 Pa. 266, 516 A.2d 672 (1986).

¹²⁵ *Id.* at 283, 516 A.2d at 681. The term "negligence" in this context denotes duty and breach concepts in determining that the defendant created an unreasonable risk. Causation then would determine if the plaintiff's injury fell within the zone of risk. See Annotation, *supra* note 2, at 980-88.

¹²⁶ RESTATEMENT (SECOND) OF TORTS, tit. B, §§ 435-439 (1965). Section 435(2) is located in chapter 16, entitled "The Causal Relation Necessary to Responsibility for Negligence." *Id.*

Other courts have interpreted section 435(2) to create a threshold at which foreseeability and extraordinariness could be used as determining factors in relieving a defendant of liability.¹²⁷ These courts found that the foreseeability and the extraordinariness of the results of a defendant's conduct can become determinative of liability, but only if, in hindsight, it appears highly extraordinary that the actor's negligent conduct brought about the plaintiff's harm.¹²⁸ In *Morgan v. District of Columbia*,¹²⁹ the court applied section 435(2) to a proximate-cause analysis.¹³⁰ The court held that liability for conduct that actually produced harm extends to all harm, foreseeable or unforeseeable, unless it appears in retrospect to be highly extraordinary that such harm resulted.¹³¹

Confusion arises over whether section 435(2) deals with questions of law or questions of fact.¹³² Regardless of whether section 435(2) applies to a question of duty or causation, the roles of the court and jury in regard to foreseeability are an important consideration.¹³³ A jury answers questions of fact while a judge resolves legal matters.¹³⁴ As long as reasonable minds could differ on a disputed factual matter,

§§ 430-462. Under chapter 16 are topic 1: "Causal Relation Necessary to the Existence of Liability for Another's Harm"; topic 2: "Causal Relation Affecting the Extent of Liability but Not Its Existence"; and topic 3: "Causal Relation Necessary to Make Actor's Conduct Contributory Negligence." *Id.* Topic 1 contains title A: "General Principles"; title B: "Rules Which Determine the Responsibility of a Negligent Actor for Harm Which His Conduct Is a Substantial Factor in Producing"; and title C: "Superseding Cause." *Id.* §§ 430-453.

Title B contains § 435A: liability for intended consequences; § 435B: liability for unintended consequences of intentional invasions; § 436: liability for physical harm resulting from emotional disturbance, § 437: actor's subsequent efforts to prevent his negligence from causing harm; and § 439 effect of contributing acts of third persons when actor's negligence is actively operating. *Id.*

¹²⁷ *Pisel v. Stamford Hosp.*, 180 Conn. 314, 341-42, 430 A.2d 1, 15 (1980); *Mitnick v. Whalen Bros.*, 115 Conn. 650, 651-52, 163 A. 414, 414-15 (1932); *Morgan v. District of Columbia*, 449 A.2d 1102, 1110 (D.C. 1982), *vacated on other grounds*, 452 A.2d 1197 (D.C. 1983), *aff'd en banc*, 468 A.2d 1306 (D.C. 1983).

¹²⁸ *Pisel*, 180 Conn. at 341-42, 430 A.2d at 15; *Mitnick*, 115 Conn. at 651-52, 163 A. 414-15.

¹²⁹ 449 A.2d 1102 (D.C. 1982), *vacated on other grounds*, 452 A.2d 1197 (D.C. 1983), *aff'd en banc*, 468 A.2d 1306 (D.C. 1983).

¹³⁰ *Id.* at 1111.

¹³¹ *Id.*

¹³² *See, e.g., Brown v. Baltimore & Ohio R.R.*, 805 F.2d 1133, 1137 (4th Cir. 1986); *Derdiarian v. Felix Contracting Corp.*, 434 N.Y.S.2d 166, 51 N.Y.2d 308, 414 N.E.2d 666, 670 (1981).

¹³³ W. PROSSER & W. KEETON, *supra* note 2, § 45, at 319; *see* L. GREEN, *supra* note 1, at 65.

¹³⁴ *See id.*; RESTATEMENT (SECOND) OF TORTS § 434 (1965).

a judge should not intrude on the jury's role in resolving that matter.¹³⁵

Most courts have found that section 435(2) is solely a matter of law for the judge to apply if appropriate under the circumstances.¹³⁶ Section 435(2) gives the power to "the court" to make a retrospective analysis to determine whether the plaintiff's harm was highly extraordinary.¹³⁷ Thus, under this interpretation, section 435(2) will be applicable only if "the court," meaning the judge, finds that, as a matter of law, it appears highly extraordinary that the actor's conduct could have brought about the harm in question.¹³⁸

Some courts have held that the extraordinariness and foreseeability of harm are important jury considerations in negligence cases.¹³⁹ In *Hall v. Atchison, Topeka & Santa Fe Railway*,¹⁴⁰ for instance, the United States Court of Appeals for the Fifth Circuit reversed the district court's decision, stating that the district judge was wrong in concluding that, as a matter of law, the plaintiff's injuries were unforeseeable.¹⁴¹ The court ruled that the jury should determine whether it was so extraordinary for the plaintiff's harm to result from the defendant's conduct that the defendant should not be liable.¹⁴²

¹³⁵ See, e.g., *Gallick v. Baltimore & Ohio R.R.*, 372 U.S. 108, 112 (1963); W. PROSSER & W. KEETON, *supra* note 2, § 45, at 319; see also L. GREEN, *supra* note 1, at 65.

¹³⁶ E.g., *Christensen v. Epley*, 287 Or. 539, 578-79, 601 P.2d 1216, 1236 (1979); *Brown v. Tinnen*, 280 Pa. Super. 512, 514-22, 421 A.2d 839, 841-44 (1980) (overturned the trial court's verdict because the trial judge included the *Restatement (Second) of Torts* § 435(2) in the jury instructions). In *Christensen* the court stated it was

not correct to simply say "foreseeability is normally a jury question. . . ." Obviously the key question . . . is whether the event leading to the plaintiff's harm was "so highly extraordinary that we can say as a matter of law that a reasonable man, making an inventory of the possibilities of harm his conduct might produce, would not have reasonably expected the injury to occur."

287 Or. at 578-79, 601 P.2d at 1236 (quoting from *Stewart v. Jefferson Plywood Co.*, 255 Or. 603, 609, 469 P.2d 783, 786 (1970)).

¹³⁷ RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

¹³⁸ See *Brown v. Tinnen*, 280 Pa. Super. 512, 514, 421 A.2d 839, 841 (1980); RESTATEMENT (SECOND) OF TORTS §§ 435(2), 453 (1965); see also *Barnes v. Geiger*, 15 Ma. App. 365, 368, 446 N.E.2d 78, 81 (1983) (section 435(2) is not a strict rule of law, but a statement of policy to be applied at the judge's discretion).

¹³⁹ *Derdiarian v. Felix Contracting Corp.*, 434 N.Y.S.2d 166, 169, 51 N.Y.2d 308, 315, 414 N.E.2d 666, 670 (1981); *Bleman v. Gold*, 431 Pa. 348, 352, 246 A.2d 376, 380 (1968) (in determining whether an intervening force is a superseding cause, foreseeability and an application of the *Restatement (Second) of Torts* § 435(2) (1965) should be considered by the jury).

¹⁴⁰ 504 F.2d 380 (5th Cir. 1974).

¹⁴¹ *Id.* at 387.

¹⁴² *Id.*

Courts often consider section 435(2) in conjunction with determining whether superseding causes exist in a particular case.¹⁴³ When courts have found that the plaintiff's harm occurred as a result of so many factors that the defendant's conduct should not be held to be the legal cause of that harm, the court often will apply section 435(2) to declare the existence of superseding causes and find that the harm to the plaintiff was highly extraordinary.¹⁴⁴ If the court finds that a superseding cause existed, then the defendant will not be held liable even if the defendant's conduct was a substantial factor in producing the plaintiff's injuries.¹⁴⁵ Whether the intervening force appears extraordinary, in retrospect, is an important consideration in determining whether an intervening force constituted a superseding cause.¹⁴⁶

Some courts applying section 435(2) have determined that, when there are highly extraordinary factors involved in the harm to the plaintiff, the defendant is not liable for such harm even if the defendant's wrongful conduct was an actual cause of the plaintiff's harm.¹⁴⁷ In *Christensen v. Epley*¹⁴⁸ the Oregon Supreme Court held that actions of the officers of a county juvenile detention center who permitted a police officer to enter the detention center were not the legal cause of the police officer's murder by an inmate.¹⁴⁹ Rather, the inmate's conduct was highly extraordinary and a superseding cause of the police officer's murder.¹⁵⁰

The doctrine of highly extraordinary causation also was applied in *Hoxsey v. Houchlei*¹⁵¹ to exonerate the defendant township in a claim

¹⁴³ See, e.g., *Barnes v. Gulf Power Co.*, 517 So. 2d 717, 720 (Fla. Dist. Ct. App. 1987); *Holbrook v. Peric*, 129 Ill. App. 3d 996, 1000, 473 N.E.2d 531, 535 (1984); RESTATEMENT (SECOND) OF TORTS § 435(2) comment c (1965).

¹⁴⁴ E.g., *Martell v. St. Charles Hosp.*, 137 Misc. 2d 980, 523 N.Y.S.2d 342 (1987); see RESTATEMENT (SECOND) OF TORTS § 440 (1965).

¹⁴⁵ *Dura Corp. v. Harned*, 703 P.2d 396, 402 (Alaska 1985); RESTATEMENT (SECOND) OF TORTS §§ 442(b), 435(2) comment c (1965).

¹⁴⁶ See *Holbrook*, 129 Ill. App. 3d at 998, 473 N.E.2d at 535. The court granted summary judgment against the plaintiff because the judge found that it was highly extraordinary that the mere fact that two vehicles, driven by the defendants, were close together would cause the plaintiff driver to become distracted, leave the road, and crash. *Id.*; see also *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986), *aff'd sub nom. Anderson v. Cryovac*, 862 F.2d 910 (1st Cir. 1988); *Young v. Tide Craft, Inc.*, 270 S.C. 453, 465, 242 S.E.2d 671, 677 (1978).

¹⁴⁷ See *Christensen v. Epley*, 287 Or. 539, 578-79, 601 P.2d 1216, 1236 (1979).

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ 135 Ill. App. 3d 176, 481 N.E.2d 990 (1985).

for wrongful death.¹⁵² In *Hoxsey*, the plaintiff was carried away by flood waters when she left her vehicle after it stalled during an attempt to cross a flooded town road.¹⁵³ The plaintiff claimed that the town's negligent maintenance of the road caused it to flood.¹⁵⁴ The Illinois Appellate Court held that the plaintiff's conduct was highly extraordinary and, therefore, the town's negligent actions were not a cause of her death.¹⁵⁵

In many cases, courts have decided not to apply the section 435(2) bar on liability because they did not identify the causation sequence as so highly extraordinary that it should prevent the defendant from being held liable.¹⁵⁶ In *Nanda v. Ford Motor Co.*,¹⁵⁷ a Ford Pinto case, the plaintiff was injured when flames shot into the passenger compartment of her vehicle after the vehicle was struck from behind.¹⁵⁸ The court did not find the circumstances so highly extraordinary that the defendant should not be liable.¹⁵⁹ Thus, the court held that the defendant car manufacturer's failure to build a fire wall between the rear fuel tank and the passenger compartment caused the plaintiff's injuries, and the defendant was therefore liable.¹⁶⁰ In *Smith v. J.C. Penney Co.*¹⁶¹ the plaintiff was injured when her highly flammable synthetic fur coat made by the defendant J.C. Penney burst into flames.¹⁶² A gas fire caused by the negligence of the co-

¹⁵² *Id.* at 181, 481 N.E.2d at 993.

¹⁵³ *Id.* at 177-78, 481 N.E.2d at 990-91.

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ See, e.g., *Petraglia v. Moller & Rothe, Inc.*, 119 A.D.2d 494, 500, 500 N.Y.S.2d 690, 692 (1986) (trial court's directed verdict reversed because the appellate court did not find it highly extraordinary that an inadequately secured door in the defendant's office would fall and seriously injure the plaintiff, a cleaning woman); *Stewart v. Jefferson Plywood Co.*, 255 Or. 603, 609, 469 P.2d 783, 786 (1970) (the court found it foreseeable and not highly extraordinary for a firefighter, while fighting a fire negligently started by the defendant, to fall through a skylight of an adjacent building); *Andor v. United Air Lines*, 79 Or. App. 311, 318-19, 719 P.2d 492, 497, 499 (1986). In *Andor*, the court refused to follow the defendant's contention that the malfunctioning of a bolt on the landing gear of the defendant's plane caused the pilot to believe mistakenly that the plane's landing gear was not down and caused the plane to circle the airport until it ran out of gas and crashed, injuring the plaintiff passenger. *Id.* The occurrences were deemed foreseeable and not so highly extraordinary as to relieve the defendant of liability. *Id.*

¹⁵⁷ 509 F.2d 213 (7th Cir. 1974)

¹⁵⁸ *Id.* at 216.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 218. The appellate judge followed two Illinois Supreme Court opinions: *Cunis v. Brennan*, 56 Ill. 2d 372, 308 N.E.2d 617 (1974), and *Mieher v. Brown*, 54 Ill. 2d 539, 301 N.E.2d 307 (1973). The appellate judge took a very limited approach toward applying the doctrine of highly extraordinary causation. 509 F.2d at 217-18.

¹⁶¹ 269 Or. 643, 525 P.2d 1299 (1974).

¹⁶² *Id.* at 646, 525 P.2d at 1301. The defendant gas station argued for the application of

defendant gas station ignited the coat.¹⁶³ Even though the circumstances of the case appeared bizarre, the Oregon Supreme Court found section 435(2) inapplicable and held both defendants liable.¹⁶⁴

The hindsight requirement of section 435(2) creates a very high standard for its application.¹⁶⁵ When looking at the consequences of a defendant's conduct after the event, the consequences always will appear less extraordinary.¹⁶⁶ Hindsight can make consequences appear ordinary even if the results of the act seemed or would seem extremely unusual at the moment of that act.¹⁶⁷ Section 435(2) may be applied only if, after taking this retrospective view, the consequences still appear so highly extraordinary as to prevent the defendant's conduct from being considered a legal cause of them.¹⁶⁸

As stated in section 435(1), the counterpart to section 435(2), if the defendant's conduct was a substantial factor in causing the plaintiff's injuries, the foreseeability of the manner in which the plaintiff was injured or the extent of the plaintiff's injuries is irrelevant to liability determinations.¹⁶⁹ Because of the hindsight requirement,

section 435(2), but the court refused to apply it because they found that the highly flammable nature of the coat and the fire caused by the gas station were both substantial factors in causing the plaintiff's injuries. *Id.* at 659-60, 525 P.2d at 1306-07. The court found liability even though defendant J.C. Penney's negligence had a predominant effect on the harm being inflicted to such a great extent. *Id.* This court applied § 435(1) of the *Restatement* in making its decision. *Id.* See *supra* notes 169-71 and accompanying text.

¹⁶³ *Id.* at 646, 659-60, 525 P.2d at 1301, 1306-07.

¹⁶⁴ *Id.* at 659-60, 525 P.2d at 1306-07.

¹⁶⁵ RESTATEMENT (SECOND) OF TORTS § 435(2) & comments c, d, e (1965). Comments c, d, and e discuss § 435(2) and its statement that hindsight should be applied in determining if the harm to the plaintiff by the defendant's conduct was highly extraordinary. Prosser has stated that comment e of the *Restatement* "is unfortunate in the stress which it lays on retrospective knowledge of all the facts, for to omniscience any event whatever must appear not only probable but quite inevitable; but the basic idea is there, that liability must stop somewhere short of the freakish and the fantastic." Prosser, *supra* note 10, at 27; see *Wilson v. American Chain & Cable Co.*, 364 F.2d 558, 562 (3d Cir. 1966) (reversed trial court's decision because the trial judge improperly instructed the jury to consider whether the defendant should have prospectively envisaged the events rather than properly instructing the jury to apply hindsight).

¹⁶⁶ *Restatement (Second) of Torts* § 435(2) comment d states:

[T]he court not only knows the stage setting which existed at the time of the defendant's negligence and which may or may not have persisted throughout, but it also follows the effects of the actor's negligence as it passes from phase to phase until it results in harm to the plaintiff.

Id.

¹⁶⁷ *Id.*

¹⁶⁸ See RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

¹⁶⁹ RESTATEMENT (SECOND) OF TORTS § 435(1) (1965). This section provides that "[i]f the actor's conduct is a substantial factor in bringing about harm to another, the fact that the actor neither foresaw nor should have foreseen the extent of the harm or the manner in which

section 435(2) does not require that the defendant actually foresaw the consequences resulting from the negligent conduct.¹⁷⁰ Moreover, the fact that a reasonable person in the defendant's shoes would not have foreseen the consequences of the conduct does not necessarily relieve the defendant of liability.¹⁷¹

V. THE USE OF SECTION 435(2) IN A HAZARDOUS WASTE TORT CASE: *ANDERSON v. W.R. GRACE & CO.*

Causation difficulties often plague hazardous waste tort cases. Complex and uncertain evidence of causation was an enormous part of one hazardous waste case in particular, *Anderson v. W.R. Grace & Co.*¹⁷² In *Anderson* the court took a unique approach in dealing with the causation problems it faced. Section 435(2) played a determinative role in the court's approach.¹⁷³

In *Anderson* leukemia and other serious illnesses struck a significant number of people, mostly children, in a small community in and around Woburn, Massachusetts.¹⁷⁴ Scientists found dangerous concentrations of trichloroethylene (TCE) and other toxic chemical solvents in two municipal wells that supplied Woburn with some of its water supply.¹⁷⁵ The residents of the community who suffered extensive injuries were using water from those wells.¹⁷⁶ Scientists also found that industrial land in Woburn surrounding the wells was contaminated with high levels of hazardous wastes including TCE.¹⁷⁷

The victims brought suit in the Federal District Court for the District of Massachusetts alleging state law tort claims against the

it occurred does not prevent him from being liable." *Id.*; see F. HARPER, *supra* note 5, § 20.5, at 147; *Derdiarian v. Felix Contracting Corp.*, 51 N.Y.2d 308, 311, 414 N.E.2d 666, 670 (1980); *Brown v. Baltimore & Ohio R.R.*, 805 F.2d 1133 (4th Cir. 1986).

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² No. 82-1672-S (D. Mass. Sept. 17, 1986), *aff'd sub nom. Anderson v. Cryovac*, 862 F.2d 910 (1st Cir. 1988).

¹⁷³ Pacelle, *supra* note 9, at 78, cols. 2-4.

¹⁷⁴ Most of these injuries included death or disability from leukemia. *Anderson*, 862 F.2d at 914.

¹⁷⁵ *Id.* at 913.

¹⁷⁶ *Id.* at 914.

¹⁷⁷ See Pacelle, *supra* note 9, at 76, col. 2. The land had a long history of industrial use for leather tanning facilities, as well as pesticide and chemical factories. *Id.* The Woburn site was ranked as one of the 10 worst hazardous waste sites in the United States. See Announcement of Anne M. Gorsuch, Administrator, EPA (Oct. 23, 1981), reprinted in 115 *Worst U.S. Dump Sites Targeted for Cleanup Under Superfund Program*, [Current Developments] 12 *Env't Rep.* (BNA) 808, 828 (1981); Comment, *supra* note 2, at 799.

owners of the contaminated land surrounding the municipal wells.¹⁷⁸ The plaintiffs claimed that the defendants improperly dumped or allowed others to dump toxic chemicals on the land, resulting in the contamination of the municipal wells.¹⁷⁹ They further claimed that the contamination of the wells caused the extensive injuries suffered by people who used the water from those wells.¹⁸⁰

After more than four years of exhaustive discovery on all issues of the case, the judge dealt a damaging procedural blow to the plaintiffs' case.¹⁸¹ The trial judge ordered the case bifurcated, under Federal Rule of Civil Procedure 42(b), into four mini-trials on certain issues of the case.¹⁸² On March 10, 1986, the first trial on the issue of causation began, and for four months the parties presented evidence regarding the contamination of the municipal wells.¹⁸³ Most of the evidence involved expert testimony as to the groundwater flow around the wells.¹⁸⁴ The plaintiffs' evidence regarding the presence and dumping of the hazardous chemicals centered around the period between the late 1950s and mid-1960s.¹⁸⁵ Each party's expert testimony strongly contradicted the expert testimony of the other, and the entire issue involved a great deal of scientific uncertainty.¹⁸⁶

After both sides presented their evidence, the trial judge ruled on the defendants' motions for directed verdicts, dealing another serious blow to the plaintiffs' case.¹⁸⁷ All of these directed verdict rulings influenced the case, but one of the judge's rulings in partic-

¹⁷⁸ See *Anderson*, No. 82-1672-S (D. Mass. Sept. 17, 1986). The case was in federal court on the grounds of diversity. *Anderson*, 862 F.2d at 914.

¹⁷⁹ *Anderson*, 862 F.2d at 914. Wells G and H in East Woburn were closed on May 22, 1979, after it was discovered that they contained high levels of carcinogenic toxic solvents, including trichloroethylene, trichloroethane, transdichloroethylene, benzene, and chloroform. *Id.* at 913; Comment, *supra* note 2, at 799 n.13.

¹⁸⁰ *Anderson*, 862 F.2d at 914.

¹⁸¹ See *id.*; Pacelle, *supra* note 9, at 77, col. 2.

¹⁸² *Anderson*, 862 F.2d at 914. The first trial would determine whether the defendants caused the contamination of the municipal wells and thus, the plaintiffs' drinking water during a certain period in which the defendant could be held liable. *Id.* The second trial would determine whether the contaminants released by the defendants caused the plaintiffs' leukemia. *Id.* The third trial would decide whether the injuries other than leukemia were caused by the defendants. *Id.* Finally, the fourth trial would involve the assessment of damages. *Id.*; see Pacelle, *supra* note 9, at 77, col. 2; Comment, *Rule 42(b) Bifurcation at an Extreme: Polyfurcation of Liability Issues in Environmental Tort Cases*, 17 B.C. ENVTL. AFF. L. REV. 123 (1989) (authored by Albert P. Bedecarré) (exhaustive discussion of polyfurcation in environmental tort cases).

¹⁸³ Pacelle, *supra* note 9, at 77, col. 4.

¹⁸⁴ *Id.* at 78, col. 1.

¹⁸⁵ *Id.* at 78, col. 4.

¹⁸⁶ See *id.* at 78, cols. 1-4.

¹⁸⁷ *Anderson*, 862 F.2d at 914.

ular was the most important decision of the trial.¹⁸⁸ The judge applied section 435(2) and a foreseeability test to determine that the defendants only could be liable for conduct within a particular time period, during which the defendants could have foreseen or could have had knowledge that their conduct could harm others.¹⁸⁹

The judge in *Anderson* applied Cardozo's reasoning in *Palsgraf* and found that the defendants owed a duty only to those people they could reasonably foresee injuring as a result of their negligence.¹⁹⁰ The judge ruled that a duty not to pollute drinking water negligently did not exist, at least until the municipal wells were built near the defendants' land. The judge also ruled that the jury could not consider any evidence of toxic waste on the defendants' land before October 1, 1964, or after May 22, 1979, because the first of the municipal wells was completed in October of 1964 and the wells were closed on May 22, 1979.¹⁹¹

In the case against co-defendant Beatrice Food Company, the judge further limited jury consideration to a period after August 27, 1968, and before May 22, 1979.¹⁹² Beatrice's predecessor-in-interest received a letter on August 27, 1968, from an environmental consultant stating that the water table on the Beatrice land was affected by the pumping of the municipal wells.¹⁹³ The judge reasoned that before the 1968 notice, it was highly extraordinary that the defendant could have foreseen injury to the plaintiffs from hazardous wastes located on the defendant's land. The judge ruled that under the facts of the case it was highly extraordinary that the defendant's dumping before 1968 should have brought about the plaintiffs'

¹⁸⁸ Pacelle, *supra* note 9, at 78, col. 2. There were primarily four decisions made in the directed verdict orders. *Anderson*, 862 F.2d at 914. The most important decision was to have the jury consider only the conduct of the defendant that occurred during a particular time period. *Id.* The other decisions were as follows. First, three of the chemicals listed in the complaint were excluded from consideration by the jury. Second, even though defendant Beatrice engaged in ultrahazardous activity, they could not be held strictly liable because they lacked the requisite intent. *Id.* Third, the defendants could not be liable for negligent failure to warn because the plaintiff failed to present adequate evidence of a special relationship between the defendants and the plaintiffs to establish a duty to warn. *Id.*

¹⁸⁹ Memorandum and Order on Motions for Directed Verdicts (June 9, 1986), *Anderson v. W.R. Grace & Co.*, No. 82-1672-S, slip op. at 2 (D. Mass. Sept. 17, 1986). The judge later instructed the jury that "[t]here can be no reasonably foreseeable risk by reason of the contamination of drinking water unless there exists a group of people likely to drink the water involved." Instructions to the Jury, *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. 1986); Pacelle, *supra* note 9, at 78, cols. 2-3.

¹⁹⁰ *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. 1986).

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *Id.*

harm.¹⁹⁴ Therefore, he applied section 435(2) of the *Restatement (Second) of Torts* and found that Beatrice's conduct prior to 1968 could not be the legal cause of the plaintiffs' harm.¹⁹⁵

In *Anderson*, the evidence of groundwater flow in the area around the municipal wells was complicated and hotly disputed between the parties.¹⁹⁶ The Alberjon River separated Beatrice's land, upon which alleged dumping of hazardous wastes occurred, from the municipal wells in question.¹⁹⁷ The plaintiffs' experts stated that the toxic solvents, after entering the aquifer,¹⁹⁸ probably were pulled by the pumping action of the two nearby municipal wells, under the Alberjon River and against the normal groundwater flow, into those wells.¹⁹⁹ The defendants' experts stated that the only water entering the municipal wells probably came from water traveling with the groundwater flow to the wells or from the Alberjon River.²⁰⁰ All of the experts stated that the flow of the groundwater and the migration of the toxins could not be determined with exact certainty because too many variables were involved in the scientific evidence of groundwater flow and the pumping effects of the wells.²⁰¹

The jury's only role in the case against Beatrice was to answer a limited special interrogatory submitted to them.²⁰² In answering the

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* Scientific uncertainty as to the groundwater flow in the area in question contributed to the judge's determination that the causation sequence appeared highly extraordinary. Hydrogeology is not an exact science, and predictions of groundwater flow are rarely definite. Chow, *Preface* to HANDBOOK OF APPLIED HYDROLOGY, at ix (V. Chow ed. 1964). The predictions of groundwater flow are based upon the experience and judgment of the hydrologist. *Id.* Groundwater flow is affected by many natural and man-made factors. Todd, *Groundwater*, in HANDBOOK OF APPLIED HYDROLOGY, at 13-7 (V. Chow ed. 1964). The flow of water beneath the surface of the ground often does very unpredictable and seemingly highly extraordinary things. *See id.* at 13-2 to 13-52.

¹⁹⁶ *Anderson v. W.R. Grace & Co.*, No. 82-1672-S, slip op. at 2 (D. Mass. Sept. 17, 1986).

¹⁹⁷ *Id.*

¹⁹⁸ An aquifer is an underground layer of permeable rock, sand, gravel, etc. containing water. WEBSTER'S NEW WORLD DICTIONARY 69 (2d college ed. 1970).

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ *Id.*; *see* Todd, *supra* note 195, at 13-7 to 13-46.

²⁰² *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986). The special interrogatory read:

Have the plaintiffs established by a preponderance of the evidence that any of the following chemicals were disposed of at the Beatrice site after August 27, 1968 and substantially contributed to the contamination of Wells G and H by these chemicals prior to May 22, 1979?

- (a) Trichloroethylene
- (b) Tetrachloroethylene
- (c) 1,2 Transdichloroethylene
- (d) 1,1,1, Trichlorethane.

Id.

interrogatory, the jury stated that the plaintiff had not established that any of the toxic chemicals in question were disposed of at the Beatrice site after August 27, 1968, and therefore did not substantially contribute to the contamination of the wells prior to May 22, 1979.²⁰³ The plaintiff then objected, claiming that the interrogatory was not adequate for jury consideration. The judge overruled the objection, made findings on the issues not determined by the interrogatory under Federal Rule of Civil Procedure 49(a), and entered a judgment for Beatrice Food Company.²⁰⁴

In summary, the judge in *Anderson* made findings limiting the extent to which the defendants could be held liable.²⁰⁵ The judge determined that the jury could only consider evidence of the defendants' actions after the defendants could have known that their actions could cause harm.²⁰⁶ These noteworthy rulings were vital to the jury's verdict of not responsible for Beatrice.²⁰⁷

VI. GUIDELINES FOR THE APPLICATION OF *RESTATEMENT* SECTION 435(2)

The concept of causation in negligence law is riddled with confusion.²⁰⁸ Concrete rules and formulas regarding causation seem impossible and consistently have met with failure.²⁰⁹ The courts should be guided by the particular facts of each case and by general concepts

²⁰³ *Id.*

²⁰⁴ *Id.*; see Federal Rule of Civil Procedure 49(a) to understand how the judge was able to make findings on issues omitted from the interrogatory. Rule 49(a) states:

If in [submitting special interrogatories to the jury] the court omits any issue of fact raised by the pleadings or the evidence, each party waives the right to a trial by jury of the issue so omitted unless before the jury retires the party demands its submission to the jury. As to an issue omitted without such demand the court may make a finding; or, if it fails to do so, it shall be deemed to have made a finding in accord with the judgment on the final verdict.

Id.

The United States Court of Appeals for the First Circuit affirmed the district court's decision in *Anderson*, holding that, under Federal Rule of Civil Procedure 49(a), the plaintiff lost the right to appeal this issue due to the plaintiff's failure seasonably to object to the special interrogatories submitted to the jury. *Anderson*, 862 F.2d at 922. If the plaintiff had wanted the jury to consider issues not in the special interrogatory, such as the pre-1968 dumping of hazardous wastes, or had wanted the judge to give special instructions to the jury, then the plaintiff was obligated to make an objection prior to the submission of the interrogatory to the jury. The appellate court deferred to the lower court and held that the district court's failure to admit the evidence of the pre-1968 pollution was not prejudicial error. *Id.*

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ *Id.*; Pacelle, *supra* note 9, at 78, col. 4.

²⁰⁸ See *supra* note 2 and accompanying text.

²⁰⁹ See Prosser, *supra* note 10, at 32 ("the mule don't kick according to no rule").

regarding the determination whether a reasonable link between negligent conduct and harm to the plaintiff exists.²¹⁰

If courts take certain considerations into account before applying section 435(2) in making liability determinations, then more consistent results will ensue and toxic tort plaintiffs will have, when appropriate, a more reasonable chance of recovering for their injuries. First, before making any final liability decision, courts should consider many factors and policy matters—only one of which is the doctrine espoused by section 435(2).²¹¹ Second, section 435(2) is not an ordinary foreseeability test because it sets a high standard; if a defendant's conduct was a substantial factor in producing harm, section 435(2) relieves the defendant only when causal links appear highly extraordinary in retrospect.²¹² Third, questions of fact should be resolved by the jury and not by the judge.²¹³ Finally, a court can find causation even though the manner of injury involves some uncertainty.²¹⁴

Public policy inevitably influences proximate-cause and liability decisions in negligence cases.²¹⁵ One such policy, embodied in section 435(2), states that a defendant should not be liable for consequences that in retrospect appear highly extraordinary.²¹⁶ As a statement of policy, section 435(2) should not be considered a hard and fast rule, and courts should examine all of the circumstances and policy considerations involved in each case before applying section 435(2) to determine that liability should not result from certain negligent conduct.²¹⁷ Another policy that may apply to toxic tort cases based

²¹⁰ *Id.*

²¹¹ See *supra* notes 65–68 and accompanying text; *infra* notes 215–20 and accompanying text; see also *Pisel v. Stamford Hosp.*, 180 Conn. 314, 341–42, 430 A.2d 1, 15 (1980); *Morgan v. District of Columbia*, 449 A.2d 1102, 1111 (D.C. 1982), *vacated on other grounds*, 452 A.2d 1197 (D.C.), *aff'd en banc*, 468 A.2d 1306 (D.C. 1983); *Petraglia v. Moller & Rothe, Inc.*, 119 A.D.2d 494, 496, 500 N.Y.S.2d 690, 692 (1986); *Andor v. United Air Lines*, 79 Or. App. 311, 318–19, 719 P.2d 492, 497, 499 (1986).

²¹² See *supra* notes 86–89 and accompanying text; *infra* notes 221–23 and accompanying text. RESTATEMENT (SECOND) OF TORTS § 435(2) comments d, e (1965).

²¹³ See *supra* notes 132–42 and accompanying text; *infra* notes 224–33 and accompanying text.

²¹⁴ *Id.* § 435(1); see *infra* notes 234–43 and accompanying text.

²¹⁵ See W. PROSSER & W. KEETON, *supra* note 2, § 41, at 264, § 42, at 273. See also *supra* notes 65–68 and accompanying text. There are many factors to be considered by a court in negligence cases and this Comment does not attempt to provide an exhaustive list of those factors.

²¹⁶ See RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

²¹⁷ *Id.* § 435(2) comment e. Comment e provides:

It is impossible to state any definite rules by which it can be determined that a particular result of the actor's negligent conduct is or is not so highly extraordinary

on negligence finds that the burden of personal injuries caused by hazardous wastes should be borne, when appropriate, by the industries negligently handling or producing that waste, rather than by the injured parties.²¹⁸ At the same time, Congress, meanwhile, in an effort to achieve another policy goal, has exerted efforts to discover and implement methods to reduce the burdens facing plaintiffs claiming personal injury damages in hazardous waste tort cases.²¹⁹ Public policy also indicates that negligent actors should be liable for harm that their negligence was a substantial factor in producing, regardless of the foreseeability of the way in which the harm occurred or the extent of the plaintiff's injuries unless it appears highly extraordinary that the harm in question resulted from their conduct or was the result of a superseding cause.²²⁰

The doctrine of law presented by section 435(2) is different from the test of foreseeability that must be met before a defendant can be held liable.²²¹ Foreseeability is required only in establishing a defendant's liability for negligence to the extent that, in looking at the circumstances from the perspective of the defendant at the time the alleged negligent act occurred, a reasonable person in the defendant's position should have foreseen some injury to someone from his actions.²²² Section 435(2), on the other hand, sets forth a doctrine that provides that a wrongdoer should not be liable for damages if, in viewing the circumstances with hindsight and applying retrospec-

as to prevent the conduct from being a legal cause of that result. This is a matter for the judgment of the court formulated after the event, and therefore, with the knowledge of the effect that was produced.

Id.; see also Prosser, *supra* note 10, at 32. See generally GREEN, RATIONALE OF PROXIMATE CAUSE (1927). Green states that strict formulas are useless in proximate cause determinations because proximate cause is based upon interest balancing and policy. *Id.* at 65.

²¹⁸ See, e.g., Brennan, *supra* note 8, at 484-85; Farber, *supra* note 2, at 1226-27; Comment, *supra* note 2, at 850-52; *Developments*, *supra* note 2, at 1611. This aspect of public policy seems obvious because victims deserve compensation from those who caused their injury. *Developments*, *supra* note 2, at 1611-13. There is, however, an argument to be made that compensation of injured parties by American industries is a cause of the United States trade deficit and inability to compete internationally. This argument was set forth in a two-page advertisement by American International Group, America's largest underwriter of commercial and industrial insurance in America. NEWSWEEK, Oct. 16, 1989, at 64-65. Industry needs to be held accountable for their harmful actions, and, unlike the situation in some other nations, American industry usually needs to be sued in order to take on such responsibility for their actions.

²¹⁹ See *supra* notes 22-31 and accompanying text.

²²⁰ RESTATEMENT (SECOND) OF TORTS § 435 (1965).

²²¹ See *supra* notes 86-88, 165-68 and accompanying text; see also RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

²²² See *supra* notes 86-88 and accompanying text.

tive knowledge of all the conditions present at the time of the defendant's conduct, it appears highly extraordinary that the wrongdoing caused those damages.²²³

In order to enable courts to make rational decisions based on the evidence, the proper role of the judge must be distinguished from the role of the jury.²²⁴ Most courts agree that a judge may apply section 435(2) to determine that, as a matter of law, a defendant should not be liable for their negligent conduct if the consequences of that conduct appear, in retrospect, highly extraordinary.²²⁵ It is well established, however, that disputes of fact and conflicts among experts should be resolved by the jury.²²⁶ The application of section 435(2) acts as a directed verdict in which a judge finds that, as a matter of law, there can be only one verdict.²²⁷ Determinations *as a matter of law* should be made on factual matters by a trial judge only if no reasonable minds could disagree on the facts.²²⁸ A judge should preserve the jury's discretion and duty to determine material facts and apply legal concepts that are open to evaluative determinations, such as foreseeability tests, in order to resolve factual disputes.²²⁹ A judge should apply section 435(2) to bar liability only when, as in directed verdicts, it appears incontrovertible that the defendants should not be held liable for their conduct.²³⁰

If the particular events in a case appear so extraordinary that, as a matter of law, the defendant should not be held liable, then the

²²³ See *supra* notes 165-68 and accompanying text; see also RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

²²⁴ See *supra* notes 132-42 and accompanying text. See also *Mason v. Texaco, Inc.*, 741 F. Supp. 1472, 1511 (D. Kan. 1990) (underlying reason for the jury system of factfinding is to "see that a fair trial occurs, that truth is found, and that justice is done on the evidence"); L. GREEN, *supra* note 1, at 65-66.

²²⁵ See *supra* notes 136-38 and accompanying text; see also RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

²²⁶ *E.g.*, *Ferebee v. Chevron Chem. Co.*, 736 F.2d 1529 (D.C. Cir. 1984). In *Ferebee* the court stated that "[t]he case was thus a classic battle of experts, a battle in which the jury must decide the victor." *Id.* at 1535. See also RESTATEMENT (SECOND) OF TORTS § 434 (1965).

²²⁷ See FED. R. CIV. P. 50(a).

²²⁸ See *id.*; W. PROSSER & W. KEETON, *supra* note 2, § 45, at 321.

²²⁹ See *id.*; see also *United States v. Drefke*, 707 F.2d 978, 982 (8th Cir.), *cert. denied*, 464 U.S. 942 (1983). Some courts and commentators have stated that a judge may make comments about the facts in a case as long as the judge instructs the jury that they are the sole finder of facts and that the comments are not binding and as long as the judge's comments are not highly prejudicial to the parties. *Wilson v. Bicycle South, Inc.*, 915 F.2d 1503, 1508 (11th Cir. 1990); *United States v. Hope*, 714 F.2d 1084, 1088 (11th Cir. 1983). Judges, however, are limited in the comments they may make on the facts and must preserve the jury's function to determine material facts. See, *e.g.*, *United States v. Fernandez*, 480 F.2d 726, 738 (2d Cir. 1973).

²³⁰ See RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

judge should direct a verdict relieving the defendant of liability.²³¹ Otherwise, foreseeability should be looked at as just one of the important factual issues to be reviewed by the jury in their proximate-cause determinations.²³² Such an approach could strike a balance between the interests in not permitting the trial judge to invade the jury's duty to make factual determinations and the risk of allowing a sympathetic jury to find liability even when extraordinary circumstances were involved.²³³

In considering whether to apply the policy of not holding an otherwise negligent actor liable for highly extraordinary occurrences, a court should keep in mind that the evidence offered to establish causation often cannot be presented with a high degree of certainty.²³⁴ This is especially true in toxic torts cases, when evidence is often at the vanguard of scientific knowledge.²³⁵ In toxic torts cases, plaintiffs have the difficult task of proving that their exposure to a particular toxic substance caused their injury and that the defendant's conduct was the cause of their exposure to that particular toxic substance.²³⁶ In hazardous waste tort cases, a plaintiff usually will have to prove that contaminants moved through the groundwater into the water supply and that the contaminants caused plaintiff's disease.²³⁷ Both groundwater movement and medical causation of cancer rarely can be proven with a high degree of certainty.²³⁸

In order to prevail in a traditional tort case, a plaintiff must establish by a preponderance of the evidence that the defendant acted negligently and that the plaintiff's injury was more-likely-than-not a result of the defendant's negligent acts.²³⁹ This standard

²³¹ See FED. R. CIV. P. 50(a); W. PROSSER & W. KEETON, *supra* note 2, § 45, at 321; see also *supra* note 136 and accompanying text.

²³² *Nelson by Tatum v. Com. Edison Co.*, 124 Ill. App. 3d 661, 659, 465 N.E.2d 513, 519 (1984); *B.N. v. K.K.*, 312 Md. 135, 139, 538 A.2d 1178 (1988) (the foreseeability test, whether in the context of causation or duty, "is intended to reflect current societal standards with respect to an acceptable nexus between the negligent act and the ensuing harm").

²³³ *Id.*

²³⁴ See Bazelon, *Science and Uncertainty: A Jurist's View*, 5 HARV. ENVTL. L. REV. 209, 210-11 (1981); Comment, *supra* note 2, at 814-15; see, e.g., *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986), *aff'd sub nom. Anderson v. Cryovac*, 862 F.2d 910 (1st Cir. 1988); *In re Richardson-Merrell, Inc. "Benedictin" Prods. Liab. Litig.*, 624 F. Supp. 1212 (S.D. Ohio 1985); *In re "Agent Orange" Prod. Liab. Litig.*, 100 F.R.D. 718 (E.D.N.Y. 1983).

²³⁵ Brennan, *supra* note 8, at 491; see *supra* note 234.

²³⁶ See *In re "Agent Orange"*, 100 F.R.D. at 721; *Anderson*, 862 F.2d at 914.

²³⁷ See, e.g., *Anderson*, 862 F.2d at 914.

²³⁸ See *supra* notes 196-201 and accompanying text.

²³⁹ RESTATEMENT (SECOND) OF TORTS § 435(1) (1965); see *supra* notes 169-71 and accompanying text.

is difficult to meet in toxic tort cases because the scientific evidence necessary is usually incapable of being established to a degree of certainty high enough to meet the burden of proof.²⁴⁰ Our legal system should be aware of the problems toxic tort plaintiffs encounter in attempting to establish sufficient causal proof and courts should adopt, as in *Allen v. United States*, more reasonable standards of proof for victims of toxic substances.²⁴¹ If plaintiffs succeed in establishing that the defendant's conduct was a substantial factor in producing their injury or that there is a sufficient factual connection between the defendant's conduct and the plaintiff's harm, then the foreseeability of the manner or extent of harm should no longer be an issue unless it appears highly extraordinary that the defendant's conduct caused the resulting harm.²⁴² Especially in hazardous waste tort cases, the court should examine all the circumstances of a case to ensure that they are using hindsight in making any decision regarding section 435(2).²⁴³

In *Anderson v. W.R. Grace & Co.* the court wrestled with a great deal of disputed and uncertain scientific evidence.²⁴⁴ The greatest amount of scientific uncertainty in the *Anderson* case arose in a dispute over groundwater movement and whether pollutants on the land owned by defendant Beatrice could have passed into municipal wells situated nearby.²⁴⁵ Beatrice's experts stated that it was nearly impossible for the pollutants to pass into the wells.²⁴⁶ The plaintiffs' experts stated that the toxins on Beatrice's land probably entered the wells, but they stated that the groundwater movement in the area could not be determined with a high degree of certainty.²⁴⁷

The dispute between the experts as to groundwater flow should have been left to the jury.²⁴⁸ Conflicts between experts, like the one

²⁴⁰ See Farber, *supra* note 2, at 1225-27; Comment, *supra* note 2, at 814-15; *Developments*, *supra* note 2, at 1611-12.

²⁴¹ See *supra* notes 59-64 and accompanying text; *Allen v. United States*, 588 F. Supp. 247, 260 (D. Utah 1984), *rev'd*, 816 F.2d 1417 (10th Cir. 1987), *cert. denied*, 484 U.S. 1004 (1988).

²⁴² See *id.*; RESTATEMENT (SECOND) OF TORTS § 435(2) (1965); W. PROSSER & W. KEETON, *supra* note 2, § 41 at 263.

²⁴³ See RESTATEMENT (SECOND) OF TORTS § 435(2) comment d, e (1965); see *supra* note 217.

²⁴⁴ *Anderson v. W.R. Grace & Co.*, No. 82-1672-S, slip op. at 2-4 (D. Mass. Sept. 17, 1986); see *supra* notes 172-207 and accompanying text.

²⁴⁵ *Anderson*, No. 82-1672-S (D. Mass. Sept. 17, 1986); Pacelle, *supra* note 6, at 78, cols. 2-3. See *supra* notes 196-201 and accompanying text.

²⁴⁶ See *supra* note 200 and accompanying text.

²⁴⁷ See *supra* notes 197-99, 201 and accompanying text.

²⁴⁸ See *supra* notes 132-42, 224-30 and accompanying text.

present in *Anderson*, should be resolved by the jury if any reasonable person could differ as to the experts' findings.²⁴⁹ The findings of both sides' experts in this case were open to different interpretations and were not to a collateral matter, but were crucial in determining that portion of the bifurcated trial that was before the court; whether the defendant's conduct caused the contamination of the wells.²⁵⁰ Therefore, it was wrong for the judge to take relevant and disputed factual issues away from jury consideration.²⁵¹

Although some of the toxins that injured the plaintiffs most likely came from parties other than Beatrice, the jury should have been left to determine whether the toxins on Beatrice's land were a substantial factor in causing the contamination of the municipal wells.²⁵² A reasonable juror could have found that Beatrice's conduct was a substantial factor in causing the well contamination, and the jury should have been left to make a proper determination of liability based on all the evidence.²⁵³

The use of section 435(2) in *Anderson* limited the evidence the jury was to consider.²⁵⁴ In answering special interrogatories regarding Beatrice's liability for contaminating the wells, the jury was not to consider pollution on Beatrice's land dumped before August 29, 1968.²⁵⁵ The judge determined that, because this was the date Beatrice received a letter from their environmental consultant stating that the water table on their land may be affected by the wells, this was the date on which the defendants were first put on notice that they may be contaminating the municipal wells.²⁵⁶ The judge further reasoned that, before this notice, it was highly extraordinary that the contamination of the wells would result from Beatrice's negligent conduct in maintaining polluted land.²⁵⁷ If applying hindsight, notice of the extent of possible risk created should not have made pre-notice events appear any more extraordinary.²⁵⁸ In hindsight, the

²⁴⁹ See *id.*; *Ferebee v. Chevron Chem. Co.*, 736 F.2d 1529 (D.C. Cir. 1984).

²⁵⁰ *Anderson*, No. 82-1672-S (D. Mass. Sept. 17, 1986); see *supra* notes 181-83 and accompanying text.

²⁵¹ *Anderson*, No. 82-1672-S (D. Mass. Sept. 17, 1986); *Pacelle*, *supra* note 9, at 77.

²⁵² See *supra* notes 132-42, 224-30 and accompanying text; see also *Pacelle*, *supra* note 9, at 77.

²⁵³ *Id.*

²⁵⁴ See *supra* notes 187-95, 202-07 and accompanying text.

²⁵⁵ See *id.*; *Pacelle*, *supra* note 9, at 78, cols. 2-3.

²⁵⁶ See *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986); *supra* notes 187-95, 202-07 and accompanying text.

²⁵⁷ See *id.*

²⁵⁸ See *id.*; see also RESTATEMENT (SECOND) OF TORTS § 435(2) (1965).

letter received by Beatrice stating that the municipal wells were affecting the water table on defendant's land clearly indicates that the movement of negligently dumped toxins to the wells was not highly extraordinary.²⁵⁹ The receipt of the letter would go merely to the notice to the defendant of potential harm to other persons. Notice should be irrelevant in this kind of case because, if Beatrice's conduct was a substantial factor in producing the harm to the plaintiff, then the foreseeability of the manner in which the plaintiff was injured is irrelevant.²⁶⁰

The root of the problem with causation and liability determinations, and possibly part of their solution, lies in the fact that there are no strict binding rules of causation. Determinations of proximate-cause and liability should be based on a finding that the causal link between conduct and harm is reasonable. Such determinations should be made by the factfinder after a full examination of the facts and circumstances of the particular case.

VII. CONCLUSION

Anderson v. W.R. Grace & Co. is the only notable toxic tort case applying section 435(2). There is, however, a possibility that courts may increase their use of section 435(2) in environmental cases because causation in hazardous waste toxic torts often requires the use of a large amount of evidence involving uncertain and novel scientific discoveries.

Courts have adopted section 435(2) of the *Restatement (Second) of Torts* to prevent liability from being imposed upon defendants when the consequences of their conduct were highly extraordinary and far beyond any reasonable apprehension of the risk created. A court applying section 435(2) analysis is required to take a retrospective look at the consequences of the defendant's conduct before it can find those consequences to be highly extraordinary. A court should realize that the hindsight requirement in looking at the circumstances of a case severely limits the possible applications of section 435(2). Unless the courts realize that section 435(2) has only

²⁵⁹ See *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986); *supra* notes 187-95, 202-07 and accompanying text.

²⁶⁰ See *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986); *supra* notes 86-88 and accompanying text; see also RESTATEMENT (SECOND) OF TORTS § 435(1) (1965); W. PROSSER & W. KEETON, *supra* note 2, §§ 41-45; Memorandum and Order on Motions for Directed Verdicts (June 9, 1986), *Anderson v. W.R. Grace & Co.*, No. 82-1672-S (D. Mass. Sept. 17, 1986), *aff'd sub nom. Anderson v. Cryovac*, 862 F.2d 910 (1st Cir. 1988).

very limited applications, it could be an excessively dangerous weapon for defendants, especially in hazardous waste tort cases, which involve a great amount of uncertainty in causation.

A federal statute setting forth strict liability for personal injuries resulting from hazardous wastes, or an administrative body established to allocate compensation for such injuries, could help solve the problems facing hazardous waste tort victims. At this time, however, in order to receive compensation, these victims must rely on suits based on tort. In the present tort system, a realization that liability in negligence is based on the general concept of fault, and not upon rigid rules of law, will help clear up some of the confusion of proximate-cause. Courts only should make directed verdict rulings on causation issues when no reasonable person could find that the defendant caused the plaintiff's injuries. The factfinder should decide causation issues by applying the general principles of tort law to the facts of each case. The courts can, and must, strike a proper balance between properly compensating victims of hazardous wastes and setting forth reasonable limits upon liability.